Appendix C
Data Validation Reports

LABORATORY DATA CONSULTANTS, INC.
7750 El Camino Real, Suite 2L Carlsbad, CA 92009 Phone: 760/634-0437 Fax: 760/634-0439

Tait Environmental Management, Inc.
701 N. Park Center Drive
Santa Ana, CA 92705
ATTN: Ms. Clara Boeru

October 30, 2007

SUBJECT: Boeing Realty Corp. Bldg C-6 Facility, Data Validation

Dear Ms. Boeru,

Enclosed is the final validation report for the fraction listed below. This SDG was received on October 15, 2007. Attachment 1 is a summary of the samples that were reviewed for each analysis.

LDC Project # 17621:

SDG #	Fraction
IQI1271	Volatiles

The data validation was performed under Tier 1 and Tier 3 guidelines. The analyses were validated using the following documents, as applicable to each method:

- USEPA, Contract Laboratory Program National Functional Guidelines for Organic Data Review, October 1999
- EPA SW 846, Third Edition, Test Methods for Evaluating Solid Waste, update 1, July 1992; update IIA, August 1993; update II, September 1994; update IIB, January 1995; update III, December 1996; update IIIA, April 1998

Please feel free to contact us if you have any questions.

Sincerely,

Stella S. Cuenco
Project Manager/Senior Chemist

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Attachment 1

LDC #17621 (Tait Environmenal Management, Inc. / Boeing Realty Corp., Bldg C-6 Facility)

LDC	SDG#	DATE REC'D	(3) DATE DUE	VOA (8260B)																															
Matrix:	Water/Soil			W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S
A	IQI1271	10/15/07	11/05/07	2	0	Tier I																													
A	IQI1271	10/15/07	11/05/07	1	0																														
Total	B/SC			3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3

Shaded cells indicate Tier III validation (all other cells are Tier II validation). Sample counts do not include MS, MSD, or DUP's.

17621ST.wpd

Boeing Realty Corp., Bldg C-6 Facility
Data Validation Reports
LDC# 17621

Volatiles

Laboratory Data Consultants, Inc.
Data Validation Report

Project/Site Name: Boeing Realty Corp. Bldg. C-6 Facility

Collection Date: September 14, 2007

LDC Report Date: October 29, 2007

Matrix: Water

Parameters: Volatiles

Validation Level: Tier 1 & 2

Laboratory: TestAmerica, Inc.

Sample Delivery Group (SDG): IQI1271

Sample Identification

WCC_03S_WG091407_0001**
MWB007_WG091407_0001
EWC001_WG091407_0001

**Indicates sample underwent Tier 2 review

Introduction

This data review covers 3 water samples listed on the cover sheet including dilutions and reanalysis as applicable. The analyses were per EPA SW 846 Method 8260B for Volatiles.

This review follows a modified outline of the USEPA Contract Laboratory Program National Functional Guidelines for Organic Data Review (October 1999) as there are no current guidelines for the method stated above.

A qualification summary table is provided at the end of this report if data has been qualified. Flags are classified as P (protocol) or A (advisory) to indicate whether the flag is due to a laboratory deviation from a specified protocol or is of technical advisory nature.

Blank results are summarized in Section V.

Field duplicates are summarized in Section XVI.

Samples indicated by a double asterisk on the front cover underwent a Tier Level 2 review. Raw data were not evaluated for the samples reviewed by Tier 1 or 2 criteria since this review is based on QC data.

The following are definitions of the data qualifiers:

U Indicates the compound or analyte was analyzed for but not detected at or above the stated limit.

J Indicates an estimated value.

R Quality control indicates the data is not usable.

N Presumptive evidence of presence of the constituent.

UJ Indicates the compound or analyte was analyzed for but not detected. The sample detection limit is an estimated value.

A Indicates the finding is based upon technical validation criteria.

P Indicates the finding is related to a protocol/contractual deviation.

None Indicates the data was not significantly impacted by the finding, therefore qualification was not required.

I. Technical Holding Times

All technical holding time requirements were met.

The chain-of-custodies were reviewed for documentation of cooler temperatures. All cooler temperatures met validation criteria.

II. GC/MS Instrument Performance Check

Instrument performance was checked at 12 hour intervals.

All ion abundance requirements were met.

Instrument performance data were not reviewed for Tier 1.

III. Initial Calibration

Initial calibration was performed using required standard concentrations.

Percent relative standard deviations (%RSD) were less than or equal to 15.0% for each individual compound and less than or equal to 30.0% for calibration check compounds (CCCs).

In the case where %RSD was greater than 15.0%, the laboratory used a calibration curve to evaluate the compound. All coefficients of determination (r^2) were greater than or equal to 0.990 .

For the purposes of technical evaluation, all compounds were evaluated against the 30.0% (%RSD) National Functional Guideline criteria. Unless noted above, all compounds were within the validation criteria.

Average relative response factors (RRF) for all volatile target compounds and system performance check compounds (SPCCs) were within method and validation criteria with the following exceptions:

Date	Compound	RRF (Limits)	Associated Samples	Flag	A or P
9/18/07	2-Butanone	0.045 (≥0.05)	WCC_03S_WG091407_0001** 7I24003-BLK	J (all detects) UJ (all non-detects)	A

Initial calibration data were not reviewed for Tier 1.

IV. Continuing Calibration

Continuing calibration was performed at the required frequencies.

Percent differences (%D) between the initial calibration RRF and the continuing calibration RRF were within the method criteria of less than or equal to 20.0% for calibration check compounds (CCCs).

For the purposes of technical evaluation, all compounds were evaluated against the 25.0% (%D) National Functional Guideline criteria. Unless noted above, all compounds were within the validation criteria.

All of the continuing calibration RRF values were within method and validation criteria with the following exceptions:

Date	Compound	RRF (Limits)	Associated Samples	Flag	A or P
9/24/07	2-Butanone	0.046 (≥0.05)	WCC_03S_WG091407_0001** 7I24003-BLK	J (all detects) UJ (all non-detects)	A

Continuing calibration data were not reviewed for Tier 1.

V. Blanks

Method blanks were reviewed for each matrix as applicable. No volatile contaminants were found in the method blanks.

VI. Surrogate Spikes

Surrogates were added to all samples and blanks as required by the method. All surrogate recoveries (%R) were within QC limits.

VII. Matrix Spike/Matrix Spike Duplicates

Matrix spike (MS) and matrix spike duplicate (MSD) samples were reviewed for each matrix as applicable. Percent recoveries (%R) and relative percent differences (RPD) were not within QC limits. Since there were no associated samples, no data were qualified.

VIII. Laboratory Control Samples (LCS)

Laboratory control samples were reviewed for each matrix as applicable. Percent recoveries (%R) were within QC limits with the following exceptions:

LCS ID	Compound	%R (Limits)	Associated Samples	Flag	A or P
7I24003-BS1	Acetone 2-Butanone 2-Hexanone Vinyl chloride	145 (30-140) 143 (40-140) 147 (45-140) 142 (55-135)	WCC_03S_WG091407_0001** MWB007_WG091407_0001 7I24003-BLK	J (all detects) J (all detects) J (all detects) J (all detects)	P

IX. Regional Quality Assurance and Quality Control

Not applicable.

X. Internal Standards

All internal standard areas and retention times were within QC limits.

Internal standards data were not reviewed for Tier 1.

XI. Target Compound Identifications

Raw data were not reviewed for this SDG.

XII. Compound Quantitation and CRQLs

Raw data were not reviewed for this SDG.

XIII. Tentatively Identified Compounds (TICs)

Raw data were not reviewed for this SDG.

XIV. System Performance

Raw data were not reviewed for this SDG.

XV. Overall Assessment of Data

Data flags are summarized at the end of this report if data has been qualified.

XVI. Field Duplicates

No field duplicates were identified in this SDG.

XVII. Field Blanks

No field blanks were identified in this SDG.

Boeing Realty Corp. Bldg. C-6 Facility
Volatiles - Data Qualification Summary - SDG IQI1271

SDG	Sample	Compound	Flag	A or P	Reason
IQI1271	WCC_03S_WG091407_0001**	2-Butanone	J (all detects) UJ (all non-detects)	A	Initial calibration (RRF)
IQI1271	WCC_03S_WG091407_0001**	2-Butanone	J (all detects) UJ (all non-detects)	A	Continuing calibration (RRF)
IQI1271	WCC_03S_WG091407_0001** MWB007_WG091407_0001	Acetone 2-Butanone 2-Hexanone Vinyl chloride	J (all detects) J (all detects) J (all detects) J (all detects)	P	Laboratory control samples (%R)

Boeing Realty Corp. Bldg. C-6 Facility
Volatiles - Laboratory Blank Data Qualification Summary - SDG IQI1271

No Sample Data Qualified in this SDG

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING
17461 Derian Avenue, Suite 100, Irvine, CA 92614 (949) 261-1022 Fax:(949) 260-3297

TAIT Environmental/Boeing
701 N. Parkcenter Drive
Santa Ana, CA 92705
Attention: Clara Boeru

Project ID: Boeing C-6 Torrance
C-6 Semi-Annual and Quarterly GWM Event
Report Number: IQI1271

Sampled: 09/14/07
Received: 09/14/07

VOLATILE ORGANICS by GC/MS (EPA 5030B/8260B)

Analyte	Method	Batch	MDL	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: IQI1271-01 (WCC_03S_WG091407_0001 - Water)									
Reporting Units: ug/l									
1,1-Dichloroethene	EPA 8260B	7I19014	42	100	**7800**	100	09/19/07	09/19/07	
Toluene	EPA 8260B	7I19014	36	100	**17000**	100	09/19/07	09/19/07	
Surrogate: 4-Bromofluorobenzene (80-120%)					*97 %*				
Surrogate: Dibromofluoromethane (80-120%)					*107 %*				
Surrogate: Toluene-d8 (80-120%)					*102 %*				
Sample ID: IQI1271-01RE1 (WCC_03S_WG091407_0001 - Water)									
Reporting Units: ug/l									
Acetone	EPA 8260B	7I24003	180	400	ND UJ	40	09/24/07	09/24/07	L
Benzene	EPA 8260B	7I24003	11	40	**170**	40	09/24/07	09/24/07	
Bromobenzene	EPA 8260B	7I24003	11	40	ND	40	09/24/07	09/24/07	
Bromochloromethane	EPA 8260B	7I24003	13	40	ND	40	09/24/07	09/24/07	
Bromodichloromethane	EPA 8260B	7I24003	12	40	ND	40	09/24/07	09/24/07	
Bromoform	EPA 8260B	7I24003	16	40	ND	40	09/24/07	09/24/07	
Bromomethane	EPA 8260B	7I24003	17	40	ND	40	09/24/07	09/24/07	
2-Butanone (MEK)	EPA 8260B	7I24003	190	200	ND UJ	40	09/24/07	09/24/07	L
n-Butylbenzene	EPA 8260B	7I24003	15	40	ND	40	09/24/07	09/24/07	
sec-Butylbenzene	EPA 8260B	7I24003	10	40	ND	40	09/24/07	09/24/07	
tert-Butylbenzene	EPA 8260B	7I24003	8.8	40	ND	40	09/24/07	09/24/07	
Carbon Disulfide	EPA 8260B	7I24003	19	40	ND	40	09/24/07	09/24/07	
Carbon tetrachloride	EPA 8260B	7I24003	11	20	ND	40	09/24/07	09/24/07	
Chlorobenzene	EPA 8260B	7I24003	14	40	ND	40	09/24/07	09/24/07	
Chloroethane	EPA 8260B	7I24003	16	80	ND	40	09/24/07	09/24/07	
Chloroform	EPA 8260B	7I24003	13	40	**34**	40	09/24/07	09/24/07	J
Chloromethane	EPA 8260B	7I24003	16	80	ND	40	09/24/07	09/24/07	
2-Chlorotoluene	EPA 8260B	7I24003	11	40	ND	40	09/24/07	09/24/07	
4-Chlorotoluene	EPA 8260B	7I24003	12	40	ND	40	09/24/07	09/24/07	
1,2-Dibromo-3-chloropropane	EPA 8260B	7I24003	39	80	ND	40	09/24/07	09/24/07	
Dibromochloromethane	EPA 8260B	7I24003	11	40	ND	40	09/24/07	09/24/07	
1,2-Dibromoethane (EDB)	EPA 8260B	7I24003	16	40	ND	40	09/24/07	09/24/07	
1,4-Dichlorobenzene	EPA 8260B	7I24003	15	40	ND	40	09/24/07	09/24/07	
1,2-Dichlorobenzene	EPA 8260B	7I24003	13	40	ND	40	09/24/07	09/24/07	
1,3-Dichlorobenzene	EPA 8260B	7I24003	14	40	ND	40	09/24/07	09/24/07	
Dichlorodifluoromethane	EPA 8260B	7I24003	10	40	ND	40	09/24/07	09/24/07	
1,2-Dichloroethane	EPA 8260B	7I24003	11	20	**28**	40	09/24/07	09/24/07	
1,1-Dichloroethane	EPA 8260B	7I24003	11	40	**300**	40	09/24/07	09/24/07	
cis-1,2-Dichloroethene	EPA 8260B	7I24003	13	40	**2400**	40	09/24/07	09/24/07	
trans-1,2-Dichloroethene	EPA 8260B	7I24003	11	40	**300**	40	09/24/07	09/24/07	
1,2-Dichloropropane	EPA 8260B	7I24003	14	40	ND	40	09/24/07	09/24/07	
2,2-Dichloropropane	EPA 8260B	7I24003	14	40	ND	40	09/24/07	09/24/07	
cis-1,3-Dichloropropene	EPA 8260B	7I24003	8.8	20	ND	40	09/24/07	09/24/07	

TestAmerica - Irvine, CA

Nicholas Marz
Project Manager

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Santa Ana, CA 92705
Attention: Clara Boeru

Project ID: Boeing C-6 Torrance
C-6 Semi-Annual and Quarterly GWM Event
Report Number: IQI1271

Sampled: 09/14/07
Received: 09/14/07

VOLATILE ORGANICS by GC/MS (EPA 5030B/8260B)

Analyte	Method	Batch	MDL	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: IQI1271-01RE1 (WCC_03S_WG091407_0001 - Water) - cont.									
Reporting Units: ug/l									
1,1-Dichloropropene	EPA 8260B	7I24003	11	40	ND	40	09/24/07	09/24/07	
trans-1,3-Dichloropropene	EPA 8260B	7I24003	13	20	ND	40	09/24/07	09/24/07	
Ethylbenzene	EPA 8260B	7I24003	10	40	**19**	40	09/24/07	09/24/07	J
Hexachlorobutadiene	EPA 8260B	7I24003	15	40	ND	40	09/24/07	09/24/07	
2-Hexanone	EPA 8260B	7I24003	100	240	ND	40	09/24/07	09/24/07	L
Iodomethane	EPA 8260B	7I24003	40	80	ND	40	09/24/07	09/24/07	
Isopropylbenzene	EPA 8260B	7I24003	10	40	ND	40	09/24/07	09/24/07	
p-Isopropyltoluene	EPA 8260B	7I24003	11	40	ND	40	09/24/07	09/24/07	
Methyl-tert-butyl Ether (MTBE)	EPA 8260B	7I24003	13	40	ND	40	09/24/07	09/24/07	
Methylene chloride	EPA 8260B	7I24003	38	40	ND	40	09/24/07	09/24/07	
4-Methyl-2-pentanone (MIBK)	EPA 8260B	7I24003	140	200	ND	40	09/24/07	09/24/07	
n-Propylbenzene	EPA 8260B	7I24003	11	40	ND	40	09/24/07	09/24/07	
Styrene	EPA 8260B	7I24003	6.4	40	ND	40	09/24/07	09/24/07	
1,1,1,2-Tetrachloroethane	EPA 8260B	7I24003	11	40	ND	40	09/24/07	09/24/07	
1,1,2,2-Tetrachloroethane	EPA 8260B	7I24003	9.6	40	ND	40	09/24/07	09/24/07	
Tetrachloroethene	EPA 8260B	7I24003	13	40	ND	40	09/24/07	09/24/07	
Tetrahydrofuran (THF)	EPA 8260B	7I24003	140	400	ND	40	09/24/07	09/24/07	
1,2,3-Trichlorobenzene	EPA 8260B	7I24003	12	40	ND	40	09/24/07	09/24/07	
1,2,4-Trichlorobenzene	EPA 8260B	7I24003	19	40	ND	40	09/24/07	09/24/07	
1,1,2-Trichloroethane	EPA 8260B	7I24003	12	40	ND	40	09/24/07	09/24/07	
1,1,1-Trichloroethane	EPA 8260B	7I24003	12	40	**40**	40	09/24/07	09/24/07	
Trichloroethene	EPA 8260B	7I24003	10	40	**520**	40	09/24/07	09/24/07	
Trichlorofluoromethane	EPA 8260B	7I24003	14	80	ND	40	09/24/07	09/24/07	
1,2,3-Trichloropropane	EPA 8260B	7I24003	16	40	ND	40	09/24/07	09/24/07	
1,2,4-Trimethylbenzene	EPA 8260B	7I24003	9.2	40	ND	40	09/24/07	09/24/07	
1,3,5-Trimethylbenzene	EPA 8260B	7I24003	10	40	ND	40	09/24/07	09/24/07	
Vinyl acetate	EPA 8260B	7I24003	40	240	ND	40	09/24/07	09/24/07	
Vinyl chloride	EPA 8260B	7I24003	12	20	**2500** J	40	09/24/07	09/24/07	L
Xylenes, Total	EPA 8260B	7I24003	36	40	**130**	40	09/24/07	09/24/07	
Surrogate: 4-Bromofluorobenzene (80-120%)					*98 %*				
Surrogate: Dibromofluoromethane (80-120%)					*104 %*				
Surrogate: Toluene-d8 (80-120%)					*104 %*				

TestAmerica - Irvine, CA

Nicholas Marz
Project Manager

10/29/07

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TAIT Environmental/Boeing
701 N. Parkcenter Drive
Santa Ana, CA 92705
Attention: Clara Boeru

Project ID: Boeing C-6 Torrance
C-6 Semi-Annual and Quarterly GWM Event
Report Number: IQI1271

Sampled: 09/14/07
Received: 09/14/07

VOLATILE ORGANICS by GC/MS (EPA 5030B/8260B)

Analyte	Method	Batch	MDL	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: IQI1271-04 (MWB007_WG091407_0001 - Water)									
Reporting Units: ug/l									
1,1-Dichloroethene	EPA 8260B	7I19014	4.2	10	**1000**	10	09/19/07	09/19/07	
Trichloroethene	EPA 8260B	7I19014	2.6	10	**1200**	10	09/19/07	09/19/07	
Surrogate: 4-Bromofluorobenzene (80-120%)					*98 %*				
Surrogate: Dibromofluoromethane (80-120%)					*109 %*				
Surrogate: Toluene-d8 (80-120%)					*102 %*				
Sample ID: IQI1271-04RE1 (MWB007_WG091407_0001 - Water)									
Reporting Units: ug/l									
Acetone	EPA 8260B	7I24003	18	40	ND	4	09/24/07	09/24/07	L
Benzene	EPA 8260B	7I24003	1.1	4.0	ND	4	09/24/07	09/24/07	
Bromobenzene	EPA 8260B	7I24003	1.1	4.0	ND	4	09/24/07	09/24/07	
Bromochloromethane	EPA 8260B	7I24003	1.3	4.0	ND	4	09/24/07	09/24/07	
Bromodichloromethane	EPA 8260B	7I24003	1.2	4.0	ND	4	09/24/07	09/24/07	
Bromoform	EPA 8260B	7I24003	1.6	4.0	ND	4	09/24/07	09/24/07	
Bromomethane	EPA 8260B	7I24003	1.7	4.0	ND	4	09/24/07	09/24/07	
2-Butanone (MEK)	EPA 8260B	7I24003	19	20	ND	4	09/24/07	09/24/07	L
n-Butylbenzene	EPA 8260B	7I24003	1.5	4.0	ND	4	09/24/07	09/24/07	
sec-Butylbenzene	EPA 8260B	7I24003	1.0	4.0	ND	4	09/24/07	09/24/07	
tert-Butylbenzene	EPA 8260B	7I24003	0.88	4.0	ND	4	09/24/07	09/24/07	
Carbon Disulfide	EPA 8260B	7I24003	1.9	4.0	ND	4	09/24/07	09/24/07	
Carbon tetrachloride	EPA 8260B	7I24003	1.1	2.0	ND	4	09/24/07	09/24/07	
Chlorobenzene	EPA 8260B	7I24003	1.4	4.0	ND	4	09/24/07	09/24/07	
Chloroethane	EPA 8260B	7I24003	1.6	8.0	ND	4	09/24/07	09/24/07	
Chloroform	EPA 8260B	7I24003	1.3	4.0	**3.1**	4	09/24/07	09/24/07	J
Chloromethane	EPA 8260B	7I24003	1.6	8.0	ND	4	09/24/07	09/24/07	
2-Chlorotoluene	EPA 8260B	7I24003	1.1	4.0	ND	4	09/24/07	09/24/07	
4-Chlorotoluene	EPA 8260B	7I24003	1.2	4.0	ND	4	09/24/07	09/24/07	
1,2-Dibromo-3-chloropropane	EPA 8260B	7I24003	3.9	8.0	ND	4	09/24/07	09/24/07	
Dibromochloromethane	EPA 8260B	7I24003	1.1	4.0	ND	4	09/24/07	09/24/07	
1,2-Dibromoethane (EDB)	EPA 8260B	7I24003	1.6	4.0	ND	4	09/24/07	09/24/07	
1,4-Dichlorobenzene	EPA 8260B	7I24003	1.5	4.0	ND	4	09/24/07	09/24/07	
1,2-Dichlorobenzene	EPA 8260B	7I24003	1.3	4.0	ND	4	09/24/07	09/24/07	
1,3-Dichlorobenzene	EPA 8260B	7I24003	1.4	4.0	ND	4	09/24/07	09/24/07	
Dichlorodifluoromethane	EPA 8260B	7I24003	1.0	4.0	ND	4	09/24/07	09/24/07	
1,2-Dichloroethane	EPA 8260B	7I24003	1.1	2.0	ND	4	09/24/07	09/24/07	
1,1-Dichloroethane	EPA 8260B	7I24003	1.1	4.0	**13**	4	09/24/07	09/24/07	
cis-1,2-Dichloroethene	EPA 8260B	7I24003	1.3	4.0	**16**	4	09/24/07	09/24/07	
trans-1,2-Dichloroethene	EPA 8260B	7I24003	1.1	4.0	**8.8**	4	09/24/07	09/24/07	
1,2-Dichloropropane	EPA 8260B	7I24003	1.4	4.0	ND	4	09/24/07	09/24/07	
2,2-Dichloropropane	EPA 8260B	7I24003	1.4	4.0	ND	4	09/24/07	09/24/07	
cis-1,3-Dichloropropene	EPA 8260B	7I24003	0.88	2.0	ND	4	09/24/07	09/24/07	

TestAmerica - Irvine, CA

Nicholas Marz
Project Manager

N 102907

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Attention: Clara Boeru

Project ID: Boeing C-6 Torrance
C-6 Semi-Annual and Quarterly GWM Event
Report Number: IQI1271

Sampled: 09/14/07
Received: 09/14/07

VOLATILE ORGANICS by GC/MS (EPA 5030B/8260B)

Analyte	Method	Batch	MDL	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: IQI1271-04RE1 (MWB007_WG091407_0001 - Water) - cont.									
Reporting Units: ug/l									
1,1-Dichloropropene	EPA 8260B	7I24003	1.1	4.0	ND	4	09/24/07	09/24/07	
trans-1,3-Dichloropropene	EPA 8260B	7I24003	1.3	2.0	ND	4	09/24/07	09/24/07	
Ethylbenzene	EPA 8260B	7I24003	1.0	4.0	ND	4	09/24/07	09/24/07	
Hexachlorobutadiene	EPA 8260B	7I24003	1.5	4.0	ND	4	09/24/07	09/24/07	
2-Hexanone	EPA 8260B	7I24003	10	24	ND	4	09/24/07	09/24/07	L
Iodomethane	EPA 8260B	7I24003	4.0	8.0	ND	4	09/24/07	09/24/07	
Isopropylbenzene	EPA 8260B	7I24003	1.0	4.0	ND	4	09/24/07	09/24/07	
p-Isopropyltoluene	EPA 8260B	7I24003	1.1	4.0	ND	4	09/24/07	09/24/07	
Methyl-tert-butyl Ether (MTBE)	EPA 8260B	7I24003	1.3	4.0	ND	4	09/24/07	09/24/07	
Methylene chloride	EPA 8260B	7I24003	3.8	4.0	ND	4	09/24/07	09/24/07	
4-Methyl-2-pentanone (MIBK)	EPA 8260B	7I24003	14	20	ND	4	09/24/07	09/24/07	
n-Propylbenzene	EPA 8260B	7I24003	1.1	4.0	ND	4	09/24/07	09/24/07	
Styrene	EPA 8260B	7I24003	0.64	4.0	ND	4	09/24/07	09/24/07	
1,1,1,2-Tetrachloroethane	EPA 8260B	7I24003	1.1	4.0	ND	4	09/24/07	09/24/07	
1,1,2,2-Tetrachloroethane	EPA 8260B	7I24003	0.96	4.0	ND	4	09/24/07	09/24/07	
Tetrachloroethene	EPA 8260B	7I24003	1.3	4.0	ND	4	09/24/07	09/24/07	
Tetrahydrofuran (THF)	EPA 8260B	7I24003	14	40	ND	4	09/24/07	09/24/07	
Toluene	EPA 8260B	7I24003	1.4	4.0	ND	4	09/24/07	09/24/07	
1,2,3-Trichlorobenzene	EPA 8260B	7I24003	1.2	4.0	ND	4	09/24/07	09/24/07	
1,2,4-Trichlorobenzene	EPA 8260B	7I24003	1.9	4.0	ND	4	09/24/07	09/24/07	
1,1,2-Trichloroethane	EPA 8260B	7I24003	1.2	4.0	ND	4	09/24/07	09/24/07	
1,1,1-Trichloroethane	EPA 8260B	7I24003	1.2	4.0	**1.4**	4	09/24/07	09/24/07	J
Trichlorofluoromethane	EPA 8260B	7I24003	1.4	8.0	ND	4	09/24/07	09/24/07	
1,2,3-Trichloropropane	EPA 8260B	7I24003	1.6	4.0	ND	4	09/24/07	09/24/07	
1,2,4-Trimethylbenzene	EPA 8260B	7I24003	0.92	4.0	ND	4	09/24/07	09/24/07	
1,3,5-Trimethylbenzene	EPA 8260B	7I24003	1.0	4.0	ND	4	09/24/07	09/24/07	
Vinyl acetate	EPA 8260B	7I24003	4.0	24	ND	4	09/24/07	09/24/07	
Vinyl chloride	EPA 8260B	7I24003	1.2	2.0	ND	4	09/24/07	09/24/07	L
Xylenes, Total	EPA 8260B	7I24003	3.6	4.0	ND	4	09/24/07	09/24/07	
Surrogate: 4-Bromofluorobenzene (80-120%)					*98 %*				
Surrogate: Dibromofluoromethane (80-120%)					*104 %*				
Surrogate: Toluene-d8 (80-120%)					*105 %*				

TestAmerica - Irvine, CA

Nicholas Marz
Project Manager

N/02907

17461 Derian Avenue, Suite 100, Irvine, CA 92614 (949) 261-1022 Fax:(949) 260-3297

TAIT Environmental/Boeing
701 N. Parkcenter Drive
Santa Ana, CA 92705
Attention: Clara Boeru

Project ID: Boeing C-6 Torrance
C-6 Semi-Annual and Quarterly GWM Event
Report Number: IQI1271

Sampled: 09/14/07
Received: 09/14/07

VOLATILE ORGANICS by GC/MS (EPA 5030B/8260B)

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: IQI1271-05 (EWC001_WG091407_0001 - Water)									
Reporting Units: ug/l									
Acetone	EPA 8260B	7I19014	220	500	**480**	50	09/19/07	09/19/07	J
Benzene	EPA 8260B	7I19014	14	50	**98**	50	09/19/07	09/19/07	
Bromobenzene	EPA 8260B	7I19014	14	50	ND	50	09/19/07	09/19/07	
Bromochloromethane	EPA 8260B	7I19014	16	50	ND	50	09/19/07	09/19/07	
Bromodichloromethane	EPA 8260B	7I19014	15	50	ND	50	09/19/07	09/19/07	
Bromoform	EPA 8260B	7I19014	20	50	ND	50	09/19/07	09/19/07	
Bromomethane	EPA 8260B	7I19014	21	50	ND	50	09/19/07	09/19/07	
2-Butanone (MEK)	EPA 8260B	7I19014	240	250	**6200**	50	09/19/07	09/19/07	
n-Butylbenzene	EPA 8260B	7I19014	18	50	ND	50	09/19/07	09/19/07	
sec-Butylbenzene	EPA 8260B	7I19014	12	50	ND	50	09/19/07	09/19/07	
tert-Butylbenzene	EPA 8260B	7I19014	11	50	ND	50	09/19/07	09/19/07	
Carbon Disulfide	EPA 8260B	7I19014	24	50	ND	50	09/19/07	09/19/07	
Carbon tetrachloride	EPA 8260B	7I19014	14	25	ND	50	09/19/07	09/19/07	
Chlorobenzene	EPA 8260B	7I19014	18	50	ND	50	09/19/07	09/19/07	
Chloroethane	EPA 8260B	7I19014	20	100	ND	50	09/19/07	09/19/07	
Chloroform	EPA 8260B	7I19014	16	50	**38**	50	09/19/07	09/19/07	J
Chloromethane	EPA 8260B	7I19014	20	100	ND	50	09/19/07	09/19/07	
2-Chlorotoluene	EPA 8260B	7I19014	14	50	ND	50	09/19/07	09/19/07	
4-Chlorotoluene	EPA 8260B	7I19014	14	50	ND	50	09/19/07	09/19/07	
1,2-Dibromo-3-chloropropane	EPA 8260B	7I19014	48	100	ND	50	09/19/07	09/19/07	
Dibromochloromethane	EPA 8260B	7I19014	14	50	ND	50	09/19/07	09/19/07	
1,2-Dibromoethane (EDB)	EPA 8260B	7I19014	20	50	ND	50	09/19/07	09/19/07	
1,4-Dichlorobenzene	EPA 8260B	7I19014	18	50	ND	50	09/19/07	09/19/07	
1,2-Dichlorobenzene	EPA 8260B	7I19014	16	50	ND	50	09/19/07	09/19/07	
1,3-Dichlorobenzene	EPA 8260B	7I19014	18	50	ND	50	09/19/07	09/19/07	
Dichlorodifluoromethane	EPA 8260B	7I19014	13	50	ND	50	09/19/07	09/19/07	
1,2-Dichloroethane	EPA 8260B	7I19014	14	25	**88**	50	09/19/07	09/19/07	
1,1-Dichloroethane	EPA 8260B	7I19014	14	50	**260**	50	09/19/07	09/19/07	
1,1-Dichloroethene	EPA 8260B	7I19014	21	50	**13000**	50	09/19/07	09/19/07	
cis-1,2-Dichloroethene	EPA 8260B	7I19014	16	50	**4100**	50	09/19/07	09/19/07	
trans-1,2-Dichloroethene	EPA 8260B	7I19014	14	50	**240**	50	09/19/07	09/19/07	
1,2-Dichloropropane	EPA 8260B	7I19014	18	50	ND	50	09/19/07	09/19/07	
2,2-Dichloropropane	EPA 8260B	7I19014	17	50	ND	50	09/19/07	09/19/07	
cis-1,3-Dichloropropene	EPA 8260B	7I19014	11	25	ND	50	09/19/07	09/19/07	
1,1-Dichloropropene	EPA 8260B	7I19014	14	50	ND	50	09/19/07	09/19/07	
trans-1,3-Dichloropropene	EPA 8260B	7I19014	16	25	ND	50	09/19/07	09/19/07	
Ethylbenzene	EPA 8260B	7I19014	12	50	**48**	50	09/19/07	09/19/07	J
Hexachlorobutadiene	EPA 8260B	7I19014	19	50	ND	50	09/19/07	09/19/07	
2-Hexanone	EPA 8260B	7I19014	130	300	ND	50	09/19/07	09/19/07	
Iodomethane	EPA 8260B	7I19014	50	100	ND	50	09/19/07	09/19/07	
Isopropylbenzene	EPA 8260B	7I19014	12	50	ND	50	09/19/07	09/19/07	

TestAmerica - Irvine, CA

Nicholas Marz
Project Manager

10/29/07

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING
17461 Derian Avenue. Suite 100, Irvine, CA 92614 (949) 261-1022 Fax:(949) 260-3297

TAIT Environmental/Boeing
701 N. Parkcenter Drive
Santa Ana, CA 92705
Attention: Clara Boeru

Project ID: Boeing C-6 Torrance
C-6 Semi-Annual and Quarterly GWM Event
Report Number: IQI1271

Sampled: 09/14/07
Received: 09/14/07

VOLATILE ORGANICS by GC/MS (EPA 5030B/8260B)

Analyte	Method	Batch	MDL	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: IQI1271-05 (EWC001_WG091407_0001 - Water) - cont.									
Reporting Units: ug/l									
p-Isopropyltoluene	EPA 8260B	7I19014	14	50	ND	50	09/19/07	09/19/07	
Methyl-tert-butyl Ether (MTBE)	EPA 8260B	7I19014	16	50	ND	50	09/19/07	09/19/07	
Methylene chloride	EPA 8260B	7I19014	48	50	**48**	50	09/19/07	09/19/07	J
4-Methyl-2-pentanone (MIBK)	EPA 8260B	7I19014	180	250	**12000**	50	09/19/07	09/19/07	
n-Propylbenzene	EPA 8260B	7I19014	14	50	ND	50	09/19/07	09/19/07	
Styrene	EPA 8260B	7I19014	8.0	50	ND	50	09/19/07	09/19/07	
1,1,1,2-Tetrachloroethane	EPA 8260B	7I19014	14	50	ND	50	09/19/07	09/19/07	
1,1,2,2-Tetrachloroethane	EPA 8260B	7I19014	12	50	ND	50	09/19/07	09/19/07	
Tetrachloroethene	EPA 8260B	7I19014	16	50	ND	50	09/19/07	09/19/07	
Tetrahydrofuran (THF)	EPA 8260B	7I19014	180	500	ND	50	09/19/07	09/19/07	
1,2,3-Trichlorobenzene	EPA 8260B	7I19014	15	50	ND	50	09/19/07	09/19/07	
1,2,4-Trichlorobenzene	EPA 8260B	7I19014	24	50	ND	50	09/19/07	09/19/07	
1,1,2-Trichloroethane	EPA 8260B	7I19014	15	50	**75**	50	09/19/07	09/19/07	
1,1,1-Trichloroethane	EPA 8260B	7I19014	15	50	**580**	50	09/19/07	09/19/07	
Trichloroethene	EPA 8260B	7I19014	13	50	**2000**	50	09/19/07	09/19/07	
Trichlorofluoromethane	EPA 8260B	7I19014	17	100	ND	50	09/19/07	09/19/07	
1,2,3-Trichloropropane	EPA 8260B	7I19014	20	50	ND	50	09/19/07	09/19/07	
1,2,4-Trimethylbenzene	EPA 8260B	7I19014	12	50	ND	50	09/19/07	09/19/07	
1,3,5-Trimethylbenzene	EPA 8260B	7I19014	13	50	ND	50	09/19/07	09/19/07	
Vinyl acetate	EPA 8260B	7I19014	50	300	ND	50	09/19/07	09/19/07	
Vinyl chloride	EPA 8260B	7I19014	15	25	**370**	50	09/19/07	09/19/07	
Xylenes, Total	EPA 8260B	7I19014	45	50	**240**	50	09/19/07	09/19/07	
Surrogate: 4-Bromofluorobenzene (80-120%)					*96 %*				
Surrogate: Dibromofluoromethane (80-120%)					*111 %*				
Surrogate: Toluene-d8 (80-120%)					*104 %*				

TestAmerica - Irvine, CA

Nicholas Marz
Project Manager

9/24/07

LDC #: 17621A1
SDG #: IQI1271
Laboratory: Test America

VALIDATION COMPLETENESS WORKSHEET
Tier 1/2/3

Date: 10/26/07
Page: 1 of 1
Reviewer: A
2nd Reviewer: CK

METHOD: GC/MS Volatiles (EPA SW 846 Method 8260B)

The samples listed below were reviewed for each of the following validation areas. Validation findings are noted in attached validation findings worksheets.

	Validation Area		Comments
I.	Technical holding times	A	Sampling dates: 9/14/07
II.	GC/MS Instrument performance check	A	Not reviewed for Tier I validation.
III.	Initial calibration	SW	Not reviewed for Tier I validation. %RSD, r2
IV.	Continuing calibration	SW	Not reviewed for Tier I validation.
V.	Blanks	A	
VI.	Surrogate spikes	A	
VII.	Matrix spike/Matrix spike duplicates	SW	none assoc'd, no qual
VIII.	Laboratory control samples	SW	LCS
IX.	Regional Quality Assurance and Quality Control	N	
X.	Internal standards	A	
XI.	Target compound identification	*N	Not reviewed for Tier I & II validation.
XII.	Compound quantitation/CRQLs	*N	Not reviewed for Tier I & II validation.
XIII.	Tentatively identified compounds (TICs)	N	Not reviewed for Tier I & II validation. not reported
XIV.	System performance	*N	Not reviewed for Tier I & II validation.
XV.	Overall assessment of data	A	
XVI.	Field duplicates	N	
XVII.	Field blanks	N	

Note: A = Acceptable; N = Not provided/applicable; SW = See worksheet; ND = No compounds detected; R = Rinsate; FB = Field blank; D = Duplicate; TB = Trip blank; EB = Equipment blank

Validated Samples:* Indicates sample underwent Tier I validation **~~Indicates sample underwent Tier III validation~~

Water

1 2	WCC_03S_WG091407_0001** 1 (1=H, CC)	11 1	7I1904-BLK	21		31	
2	MWB007_WG091407_0001* 4	12 2	7I24003-BLK	22		32	
3	EWC001_WG091407_0001** 5	13		23		33	
4		14		24		34	
5		15		25		35	
6		16		26		36	
7		17		27		37	
8		18		28		38	
9		19		29		39	
10		20		30		40	

TARGET COMPOUND WORKSHEET

METHOD: VOA (EPA SW 846 Method 8260B)

A. Chloromethane*	S. Trichloroethene	KK. Trichlorofluoromethane	CCC. tert-Butylbenzene	UUU. 1,2-Dichlorotetrafluoroethane
B. Bromomethane	T. Dibromochloromethane	LL. Methyl-tert-butyl ether	DDD. 1,2,4-Trimethylbenzene	VVV. 4-Ethyltoluene
C. Vinyl chorlde**	U. 1,1,2-Trichloroethane	MM. 1,2-Dibromo-3-chloropropane	EEE. sec-Butylbenzene	WWW. Ethanol
D. Chloroethane	V. Benzene	NN. Methyl ethyl ketone	FFF. 1,3-Dichlorobenzene	XXX. Di-isopropyl ether
E. Methylene chloride	W. trans-1,3-Dichloropropene	OO. 2,2-Dichloropropane	GGG. p-Isopropyltoluene	YYY. tert-Butanol
F. Acetone	X. Bromoform*	PP. Bromochloromethane	HHH. 1,4-Dichlorobenzene	ZZZ. tert-Butyl alcohol
G. Carbon disulfide	Y. 4-Methyl-2-pentanone	QQ. 1,1-Dichloropropene	III. n-Butylbenzene	AAAA. Ethyl tert-butyl ether
H. 1,1-Dichloroethene**	Z. 2-Hexanone	RR. Dibromomethane	JJJ. 1,2-Dichlorobenzene	BBBB. tert-Amyl methyl ether
I. 1,1-Dichloroethane*	AA. Tetrachloroethene	SS. 1,3-Dichloropropane	KKK. 1,2,4-Trichlorobenzene	CCCC.1-Chlorohexane
J. 1,2-Dichloroethene, total	BB. 1,1,2,2-Tetrachloroethane*	TT. 1,2-Dibromoethane	LLL. Hexachlorobutadiene	DDDD. Isopropyl alcohol
K. Chloroform**	CC. Toluene**	UU. 1,1,1,2-Tetrachloroethane	MMM. Naphthalene	EEEE. Acetonitrile
L. 1,2-Dichloroethane	DD. Chlorobenzene*	VV. Isopropylbenzene	NNN. 1,2,3-Trichlorobenzene	FFFF. Acrolein
M. 2-Butanone	EE. Ethylbenzene**	WW. Bromobenzene	OOO. 1,3,5-Trichlorobenzene	GGGG. Acrylonitrile
N. 1,1,1-Trichloroethane	FF. Styrene	XX. 1,2,3-Trichloropropane	PPP. trans-1,2-Dichloroethene	HHHH. 1,4-Dioxane
O. Carbon tetrachloride	GG. Xylenes, total	YY. n-Propylbenzene	QQQ. cis-1,2-Dichloroethene	IIII. Isobutyl alcohol
P. Bromodichloromethane	HH. Vinyl acetate	ZZ. 2-Chlorotoluene	RRR. m,p-Xylenes	JJJJ. Methacrylonitrile
Q. 1,2-Dichloropropane**	II. 2-Chloroethylvinyl ether	AAA. 1,3,5-Trimethylbenzene	SSS. o-Xylene	KKKK. Propionitrile
R. cis-1,3-Dichloropropene	JJ. Dichlorodifluoromethane	BBB. 4-Chlorotoluene	TTT. 1,1,2-Trichloro-1,2,2-trifluoroethane	LLLL.

* = System performance check compounds (SPCC) for RRF ; ** = Calibration check compounds (CCC) for %RSD.

LDC #: 17621A1
SDG #: 121127I

VALIDATION FINDINGS WORKSHEET
Initial Calibration

Reviewer: A
2nd Reviewer: [illegible]

METHOD: GC/MS VOA (EPA SW 846 Method 8260B)

Please see qualifications below for all questions answered "N". Not applicable questions are identified as "N/A".

- (Y) N N/A — Did the laboratory perform a 5 point calibration prior to sample analysis?
- (Y) N N/A — Were percent relative standard deviations (%RSD) and relative response factors (RRF) within method criteria for all CCC's and SPCC's?
- (Y) N N/A — Was a curve fit used for evaluation? If yes, what was the acceptance criteria used for evaluation?________
- (Y) N N/A — Did the initial calibration meet the acceptance criteria?
- Y (N) N/A — Were all %RSDs and RRFs within the validation criteria of ≤30 %RSD and ≥0.05 RRF ?

#	Date	Standard ID	Compound	Finding %RSD (Limit: ≤30.0%)	Finding RRF (Limit: ≥0.05)	Associated Samples	Qualifications
	9/18/07	ICAL	M		0.045	~~7,3, blks~~	J/UJ/A
						~~7I19014-BLK~~	
						1, 7I24003-BLK	

LDC #: 17621A1
SDG #: 18127

VALIDATION FINDINGS WORKSHEET
Continuing Calibration

Reviewer: K
2nd Reviewer: CT

METHOD: GC/MS VOA (EPA SW 846 Method 8260)

Please see qualifications below for all questions answered "N". Not applicable questions are identified as "N/A".

(Y) N N/A Was a continuing calibration standard analyzed at least once every 12 hours for each instrument?
(Y) N N/A Were percent differences (%D) and relative response factors (RRF) within method criteria for all CCC's and SPCC's ?
Y (N) N/A Were all %D and RRFs within the validation criteria of ≤25 %D and ≥0.05 RRF ?

#	Date	Standard ID	Compound	Finding %D (Limit: ≤25.0%)	Finding RRF (Limit: ≥0.05)	Associated Samples	Qualifications
	9/24/07	VSTD025	M		0.046	1, 7ID4003-BLK	J/UJ/A

LDC #: 17621A1
SDG #: 181127

VALIDATION FINDINGS WORKSHEET
Laboratory Control Samples (LCS)

Page: 1 of 1
Reviewer: [signature]
2nd Reviewer: [signature]

METHOD: GC/MS VOA (EPA SW 846 Method 8260B)

Please see qualifications below for all questions answered "N". Not applicable questions are identified as "N/A".

Y N N/A (Y circled) Was a LCS required?
Y N N/A (N circled) Were the LCS percent recoveries (%R) and relative percent difference (RPD) within the QC limits?

#	Date	LCS/LCSD ID	Compound	LCS %R (Limits)	LCSD %R (Limits)	RPD (Limits)	Associated Samples	Qualifications
		7I24003-BS1	F	145 (30-140)	( )	( )	1, 2, 7I24003-BLK	J dets/P
			M	143 (40-140)	( )	( )		↓
			Z	147 (45-140)	( )	( )		
			C	142 (55-135)	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		

LABORATORY DATA CONSULTANTS, INC.
7750 El Camino Real, Suite 2L Carlsbad, CA 92009 Phone: 760/634-0437 Fax: 760/634-0439

Tait Environmental Management, Inc.
701 N. Park Center Drive
Santa Ana, CA 92705
ATTN: Ms. Clara Boeru

October 30, 2007

SUBJECT: Boeing Realty Corp. Bldg C-6 Facility, Data Validation

Dear Ms. Boeru,

Enclosed is the final validation report for the fraction listed below. This SDG was received on October 16, 2007. Attachment 1 is a summary of the samples that were reviewed for each analysis.

LDC Project # 17624:

SDG #	Fraction
IQI1657	Volatiles

The data validation was performed under Tier 2 guidelines. The analyses were validated using the following documents, as applicable to each method:

- USEPA, Contract Laboratory Program National Functional Guidelines for Organic Data Review, October 1999
- EPA SW 846, Third Edition, Test Methods for Evaluating Solid Waste, update 1, July 1992; update IIA, August 1993; update II, September 1994; update IIB, January 1995; update III, December 1996; update IIIA, April 1998

Please feel free to contact us if you have any questions.

Sincerely,

Stella S. Cuenco
Project Manager/Senior Chemist

V:\LOGIN\TAIT\17624COV.wpd

Attachment 1

LDC #17624 (Tait Environmenal Management, Inc. / Boeing Realty Corp., Bldg C-6 Facility)

LDC	SDG#	DATE REC'D	(3) DATE DUE	VOA (8260B)																													
Matrix:	Water/Soil			W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S
A	IQI1657	10/16/07	11/06/07	1	0																												
Total	B/SC			1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1

Shaded cells indicate Tier III validation (all other cells are Tier II validation). Sample counts do not include MS, MSD, or DUP's.

17624ST.wpd

Boeing Realty Corp., Bldg C-6 Facility
Data Validation Reports
LDC# 17624

Volatiles

Laboratory Data Consultants, Inc.
Data Validation Report

Project/Site Name: Boeing Realty Corp., Bldg. C-6 Facility

Collection Date: September 19, 2007

LDC Report Date: October 29, 2007

Matrix: Water

Parameters: Volatiles

Validation Level: Tier 2

Laboratory: TestAmerica, Inc.

Sample Delivery Group (SDG): IQI1657

Sample Identification

MWB019_WG091907_0001

Introduction

This data review covers one water sample listed on the cover sheet including dilutions and reanalysis as applicable. The analyses were per EPA SW 846 Method 8260B for Volatiles.

This review follows a modified outline of the USEPA Contract Laboratory Program National Functional Guidelines for Organic Data Review (October 1999) as there are no current guidelines for the method stated above.

A qualification summary table is provided at the end of this report if data has been qualified. Flags are classified as P (protocol) or A (advisory) to indicate whether the flag is due to a laboratory deviation from a specified protocol or is of technical advisory nature.

Blank results are summarized in Section V.

Field duplicates are summarized in Section XVI.

Raw data were not reviewed for this SDG. The review was based on QC data.

The following are definitions of the data qualifiers:

U Indicates the compound or analyte was analyzed for but not detected at or above the stated limit.

J Indicates an estimated value.

R Quality control indicates the data is not usable.

N Presumptive evidence of presence of the constituent.

UJ Indicates the compound or analyte was analyzed for but not detected. The sample detection limit is an estimated value.

A Indicates the finding is based upon technical validation criteria.

P Indicates the finding is related to a protocol/contractual deviation.

None Indicates the data was not significantly impacted by the finding, therefore qualification was not required.

I. Technical Holding Times

All technical holding time requirements were met.

The chain-of-custodies were reviewed for documentation of cooler temperatures. All cooler temperatures met validation criteria.

II. GC/MS Instrument Performance Check

Instrument performance was checked at 12 hour intervals.

All ion abundance requirements were met.

III. Initial Calibration

Initial calibration was performed using required standard concentrations.

Percent relative standard deviations (%RSD) were less than or equal to 15.0% for each individual compound and less than or equal to 30.0% for calibration check compounds (CCCs).

In the case where %RSD was greater than 15.0%, the laboratory used a calibration curve to evaluate the compound. All coefficients of determination (r^2) were greater than or equal to 0.990 .

For the purposes of technical evaluation, all compounds were evaluated against the 30.0% (%RSD) National Functional Guideline criteria. Unless noted above, all compounds were within the validation criteria.

Average relative response factors (RRF) for all volatile target compounds and system performance check compounds (SPCCs) were within method and validation criteria with the following exceptions:

Date	Compound	RRF (Limits)	Associated Samples	Flag	A or P
9/18/07	2-Butanone	0.045 (≥0.05)	All samples in SDG IQI1657	J (all detects) UJ (all non-detects)	A

IV. Continuing Calibration

Continuing calibration was performed at the required frequencies.

Percent differences (%D) between the initial calibration RRF and the continuing calibration RRF were within the method criteria of less than or equal to 20.0% for calibration check compounds (CCCs).

For the purposes of technical evaluation, all compounds were evaluated against the 25.0% (%D) National Functional Guideline criteria. Unless noted above, all compounds were within the validation criteria with the following exceptions:

Date	Compound	%D	Associated Samples	Flag	A or P
9/25/07	Acetone 2-Butanone 2-Hexanone	51.4 48.9 50.9	All samples in SDG IQI1657	J (all detects) UJ (all non-detects)	A

All of the continuing calibration RRF values were within method and validation criteria.

V. Blanks

Method blanks were reviewed for each matrix as applicable. No volatile contaminants were found in the method blanks.

VI. Surrogate Spikes

Surrogates were added to all samples and blanks as required by the method. All surrogate recoveries (%R) were within QC limits.

VII. Matrix Spike/Matrix Spike Duplicates

Matrix spike (MS) and matrix spike duplicate (MSD) samples were reviewed for each matrix as applicable. Percent recoveries (%R) and relative percent differences (RPD) were not within QC limits. Since there were no associated samples, no data were qualified.

VIII. Laboratory Control Samples (LCS)

Laboratory control samples were reviewed for each matrix as applicable. Percent recoveries (%R) were within QC limits.

IX. Regional Quality Assurance and Quality Control

Not applicable.

X. Internal Standards

All internal standard areas and retention times were within QC limits.

XI. Target Compound Identifications

Raw data were not reviewed for this SDG.

XII. Compound Quantitation and CRQLs

Raw data were not reviewed for this SDG.

XIII. Tentatively Identified Compounds (TICs)

Raw data were not reviewed for this SDG.

XIV. System Performance

Raw data were not reviewed for this SDG.

XV. Overall Assessment of Data

Data flags are summarized at the end of this report if data has been qualified.

XVI. Field Duplicates

No field duplicates were identified in this SDG.

XVII. Field Blanks

No field blanks were identified in this SDG.

Boeing Realty Corp., Bldg. C-6 Facility
Volatiles - Data Qualification Summary - SDG IQI1657

SDG	Sample	Compound	Flag	A or P	Reason
IQI1657	MWB019_WG091907_0001	2-Butanone	J (all detects) UJ (all non-detects)	A	Initial calibration (RRF)
IQI1657	MWB019_WG091907_0001	Acetone 2-Butanone 2-Hexanone	J (all detects) UJ (all non-detects)	A	Continuing calibration (%D)

Boeing Realty Corp., Bldg. C-6 Facility
Volatiles - Laboratory Blank Data Qualification Summary - SDG IQI1657

No Sample Data Qualified in this SDG

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING
17461 Derian Avenue, Suite 100, Irvine, CA 92614 (949) 261-1022 Fax:(949) 260-3297

TAIT Environmental/Boeing
701 N. Parkcenter Drive
Santa Ana, CA 92705
Attention: Clara Boeru

Project ID: Boeing C-6 Torrance
C-6 Semi Annual and Quarterly GWM Event
Report Number: IQI1657

Sampled: 09/19/07
Received: 09/19/07

VOLATILE ORGANICS by GC/MS (EPA 5030B/8260B)

Analyte	Method	Batch	MDL	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: IQI1657-02 (MWB019_WG091907_0001 - Water)									
Reporting Units: ug/l									
Chloroform	EPA 8260B	7I24021	16	50	**2000**	50	09/24/07	09/24/07	
Surrogate: 4-Bromofluorobenzene (80-120%)					*98 %*				
Surrogate: Dibromofluoromethane (80-120%)					*106 %*				
Surrogate: Toluene-d8 (80-120%)					*104 %*				
Sample ID: IQI1657-02RE1 (MWB019_WG091907_0001 - Water)									
Reporting Units: ug/l									
Acetone	EPA 8260B	7I25011	45	100	ND UJ	10	09/25/07	09/25/07	C
Benzene	EPA 8260B	7I25011	2.8	10	ND	10	09/25/07	09/25/07	
Bromobenzene	EPA 8260B	7I25011	2.7	10	ND	10	09/25/07	09/25/07	
Bromochloromethane	EPA 8260B	7I25011	3.2	10	ND	10	09/25/07	09/25/07	
Bromodichloromethane	EPA 8260B	7I25011	3.0	10	ND	10	09/25/07	09/25/07	
Bromoform	EPA 8260B	7I25011	4.0	10	ND	10	09/25/07	09/25/07	
Bromomethane	EPA 8260B	7I25011	4.2	10	ND	10	09/25/07	09/25/07	
2-Butanone (MEK)	EPA 8260B	7I25011	47	50	ND UJ	10	09/25/07	09/25/07	C
n-Butylbenzene	EPA 8260B	7I25011	3.7	10	ND	10	09/25/07	09/25/07	
sec-Butylbenzene	EPA 8260B	7I25011	2.5	10	ND	10	09/25/07	09/25/07	
tert-Butylbenzene	EPA 8260B	7I25011	2.2	10	ND	10	09/25/07	09/25/07	
Carbon Disulfide	EPA 8260B	7I25011	4.8	10	ND	10	09/25/07	09/25/07	
Carbon tetrachloride	EPA 8260B	7I25011	2.8	5.0	**13**	10	09/25/07	09/25/07	
Chlorobenzene	EPA 8260B	7I25011	3.6	10	ND	10	09/25/07	09/25/07	
Chloroethane	EPA 8260B	7I25011	4.0	20	ND	10	09/25/07	09/25/07	
Chloromethane	EPA 8260B	7I25011	4.0	20	ND	10	09/25/07	09/25/07	
2-Chlorotoluene	EPA 8260B	7I25011	2.8	10	ND	10	09/25/07	09/25/07	
4-Chlorotoluene	EPA 8260B	7I25011	2.9	10	ND	10	09/25/07	09/25/07	
1,2-Dibromo-3-chloropropane	EPA 8260B	7I25011	9.7	20	ND	10	09/25/07	09/25/07	
Dibromochloromethane	EPA 8260B	7I25011	2.8	10	ND	10	09/25/07	09/25/07	
1,2-Dibromoethane (EDB)	EPA 8260B	7I25011	4.0	10	ND	10	09/25/07	09/25/07	
1,4-Dichlorobenzene	EPA 8260B	7I25011	3.7	10	ND	10	09/25/07	09/25/07	
1,2-Dichlorobenzene	EPA 8260B	7I25011	3.2	10	ND	10	09/25/07	09/25/07	
1,3-Dichlorobenzene	EPA 8260B	7I25011	3.5	10	ND	10	09/25/07	09/25/07	
Dichlorodifluoromethane	EPA 8260B	7I25011	2.6	10	ND	10	09/25/07	09/25/07	
1,2-Dichloroethane	EPA 8260B	7I25011	2.8	5.0	ND	10	09/25/07	09/25/07	
1,1-Dichloroethane	EPA 8260B	7I25011	2.7	10	ND	10	09/25/07	09/25/07	
1,1-Dichloroethene	EPA 8260B	7I25011	4.2	10	**8.1**	10	09/25/07	09/25/07	J
cis-1,2-Dichloroethene	EPA 8260B	7I25011	3.2	10	ND	10	09/25/07	09/25/07	
trans-1,2-Dichloroethene	EPA 8260B	7I25011	2.7	10	ND	10	09/25/07	09/25/07	
1,2-Dichloropropane	EPA 8260B	7I25011	3.5	10	ND	10	09/25/07	09/25/07	
2,2-Dichloropropane	EPA 8260B	7I25011	3.4	10	ND	10	09/25/07	09/25/07	
cis-1,3-Dichloropropene	EPA 8260B	7I25011	2.2	5.0	ND	10	09/25/07	09/25/07	
1,1-Dichloropropene	EPA 8260B	7I25011	2.8	10	ND	10	09/25/07	09/25/07	

TestAmerica - Irvine, CA

Nicholas Marz
Project Manager

10/29/07

TestAmerica
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TAIT Environmental/Boeing
701 N. Parkcenter Drive
Santa Ana, CA 92705
Attention: Clara Boeru

Project ID: Boeing C-6 Torrance
C-6 Semi Annual and Quarterly GWM Event
Report Number: IQI1657

Sampled: 09/19/07
Received: 09/19/07

VOLATILE ORGANICS by GC/MS (EPA 5030B/8260B)

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: IQI1657-02RE1 (MWB019_WG091907_0001 - Water) - cont.									
Reporting Units: ug/l									
trans-1,3-Dichloropropene	EPA 8260B	7I25011	3.2	5.0	ND	10	09/25/07	09/25/07	
Ethylbenzene	EPA 8260B	7I25011	2.5	10	ND	10	09/25/07	09/25/07	
Hexachlorobutadiene	EPA 8260B	7I25011	3.8	10	ND	10	09/25/07	09/25/07	
2-Hexanone	EPA 8260B	7I25011	26	60	ND UJ	10	09/25/07	09/25/07	C
Iodomethane	EPA 8260B	7I25011	10	20	ND	10	09/25/07	09/25/07	
Isopropylbenzene	EPA 8260B	7I25011	2.5	10	ND	10	09/25/07	09/25/07	
p-Isopropyltoluene	EPA 8260B	7I25011	2.8	10	ND	10	09/25/07	09/25/07	
Methyl-tert-butyl Ether (MTBE)	EPA 8260B	7I25011	3.2	10	ND	10	09/25/07	09/25/07	
Methylene chloride	EPA 8260B	7I25011	9.5	10	ND	10	09/25/07	09/25/07	
4-Methyl-2-pentanone (MIBK)	EPA 8260B	7I25011	35	50	ND	10	09/25/07	09/25/07	
n-Propylbenzene	EPA 8260B	7I25011	2.7	10	ND	10	09/25/07	09/25/07	
Styrene	EPA 8260B	7I25011	1.6	10	ND	10	09/25/07	09/25/07	
1,1,1,2-Tetrachloroethane	EPA 8260B	7I25011	2.7	10	ND	10	09/25/07	09/25/07	
1,1,2,2-Tetrachloroethane	EPA 8260B	7I25011	2.4	10	ND	10	09/25/07	09/25/07	
Tetrachloroethene	EPA 8260B	7I25011	3.2	10	**170**	10	09/25/07	09/25/07	
Tetrahydrofuran (THF)	EPA 8260B	7I25011	35	100	ND	10	09/25/07	09/25/07	
Toluene	EPA 8260B	7I25011	3.6	10	ND	10	09/25/07	09/25/07	
1,2,3-Trichlorobenzene	EPA 8260B	7I25011	3.0	10	ND	10	09/25/07	09/25/07	
1,2,4-Trichlorobenzene	EPA 8260B	7I25011	4.8	10	ND	10	09/25/07	09/25/07	
1,1,2-Trichloroethane	EPA 8260B	7I25011	3.0	10	ND	10	09/25/07	09/25/07	
1,1,1-Trichloroethane	EPA 8260B	7I25011	3.0	10	ND	10	09/25/07	09/25/07	
Trichloroethene	EPA 8260B	7I25011	2.6	10	**280**	10	09/25/07	09/25/07	
Trichlorofluoromethane	EPA 8260B	7I25011	3.4	20	ND	10	09/25/07	09/25/07	
1,2,3-Trichloropropane	EPA 8260B	7I25011	4.0	10	ND	10	09/25/07	09/25/07	
1,2,4-Trimethylbenzene	EPA 8260B	7I25011	2.3	10	ND	10	09/25/07	09/25/07	
1,3,5-Trimethylbenzene	EPA 8260B	7I25011	2.6	10	ND	10	09/25/07	09/25/07	
Vinyl acetate	EPA 8260B	7I25011	10	60	ND	10	09/25/07	09/25/07	
Vinyl chloride	EPA 8260B	7I25011	3.0	5.0	ND	10	09/25/07	09/25/07	
Xylenes, Total	EPA 8260B	7I25011	9.0	10	ND	10	09/25/07	09/25/07	
Surrogate: 4-Bromofluorobenzene (80-120%)					*95 %*				
Surrogate: Dibromofluoromethane (80-120%)					*103 %*				
Surrogate: Toluene-d8 (80-120%)					*103 %*				

TestAmerica - Irvine, CA

Nicholas Marz
Project Manager

K/02907

LDC #: 17624A1
SDG #: IQI1657
Laboratory: Test America

VALIDATION COMPLETENESS WORKSHEET
Tier 2

Date: 10/26/07
Page: 1 of 1
Reviewer: N
2nd Reviewer: Q

METHOD: GC/MS Volatiles (EPA SW 846 Method 8260B)

The samples listed below were reviewed for each of the following validation areas. Validation findings are noted in attached validation findings worksheets.

	Validation Area		Comments
I.	Technical holding times	A	Sampling dates: 9/19/07
II.	GC/MS Instrument performance check	A	
III.	Initial calibration	SW	
IV.	Continuing calibration ~~ICV~~	SW	
V.	Blanks	A	
VI.	Surrogate spikes	A	
VII.	Matrix spike/Matrix spike duplicates	SW	MWC009- none reqd, no qual
VIII.	Laboratory control samples	A	LCS
IX.	Regional Quality Assurance and Quality Control	N	
X.	Internal standards	A	
XI.	Target compound identification	N	
XII.	Compound quantitation/CRQLs	N	
XIII.	Tentatively identified compounds (TICs)	N	
XIV.	System performance	N	
XV.	Overall assessment of data	A	
XVI.	Field duplicates	N	
XVII.	Field blanks	N	

Note: A = Acceptable
N = Not provided/applicable
SW = See worksheet
ND = No compounds detected
R = Rinsate
FB = Field blank
D = Duplicate
TB = Trip blank
EB = Equipment blank

Validated Samples:

1	MWB019_WG091907_0001 W	11	7I24021-BLK	21		31	
2		12	7I25011-BLK	22		32	
3		13		23		33	
4		14		24		34	
5		15		25		35	
6		16		26		36	
7		17		27		37	
8		18		28		38	
9		19		29		39	
10		20		30		40	

TARGET COMPOUND WORKSHEET

METHOD: VOA (EPA SW 846 Method 8260B)

A. Chloromethane*	U. 1,1,2-Trichloroethane	OO. 2,2-Dichloropropane	III. n-Butylbenzene	CCCC.1-Chlorohexane
B. Bromomethane	V. Benzene	PP. Bromochloromethane	JJJ. 1,2-Dichlorobenzene	DDDD. Isopropyl alcohol
C. Vinyl choride**	W. trans-1,3-Dichloropropene	QQ. 1,1-Dichloropropene	KKK. 1,2,4-Trichlorobenzene	EEEE. Acetonitrile
D. Chloroethane	X. Bromoform*	RR. Dibromomethane	LLL. Hexachlorobutadiene	FFFF. Acrolein
E. Methylene chloride	Y. 4-Methyl-2-pentanone	SS. 1,3-Dichloropropane	MMM. Naphthalene	GGGG. Acrylonitrile
F. Acetone	Z. 2-Hexanone	TT. 1,2-Dibromoethane	NNN. 1,2,3-Trichlorobenzene	HHHH. 1,4-Dioxane
G. Carbon disulfide	AA. Tetrachloroethene	UU. 1,1,1,2-Tetrachloroethane	OOO. 1,3,5-Trichlorobenzene	IIII. Isobutyl alcohol
H. 1,1-Dichloroethene**	BB. 1,1,2,2-Tetrachloroethane*	VV. Isopropylbenzene	PPP. trans-1,2-Dichloroethene	JJJJ. Methacrylonitrile
I. 1,1-Dichloroethane*	CC. Toluene**	WW. Bromobenzene	QQQ. cis-1,2-Dichloroethene	KKKK. Propionitrile
J. 1,2-Dichloroethene, total	DD. Chlorobenzene*	XX. 1,2,3-Trichloropropane	RRR. m,p-Xylenes	LLLL. Ethyl ether
K. Chloroform**	EE. Ethylbenzene**	YY. n-Propylbenzene	SSS. o-Xylene	MMMM. Benzyl chloride
L. 1,2-Dichloroethane	FF. Styrene	ZZ. 2-Chlorotoluene	TTT. 1,1,2-Trichloro-1,2,2-trifluoroethane	NNNN.
M. 2-Butanone	GG. Xylenes, total	AAA. 1,3,5-Trimethylbenzene	UUU. 1,2-Dichlorotetrafluoroethane	OOOO.
N. 1,1,1-Trichloroethane	HH. Vinyl acetate	BBB. 4-Chlorotoluene	VVV. 4-Ethyltoluene	PPPP.
O. Carbon tetrachloride	II. 2-Chloroethylvinyl ether	CCC. tert-Butylbenzene	WWW. Ethanol	QQQQ.
P. Bromodichloromethane	JJ. Dichlorodifluoromethane	DDD. 1,2,4-Trimethylbenzene	XXX. Di-isopropyl ether	RRRR.
Q. 1,2-Dichloropropane**	KK. Trichlorofluoromethane	EEE. sec-Butylbenzene	YYY. tert-Butanol	SSSS.
R. cis-1,3-Dichloropropene	LL. Methyl-tert-butyl ether	FFF. 1,3-Dichlorobenzene	ZZZ. tert-Butyl alcohol	TTTT.
S. Trichloroethene	MM. 1,2-Dibromo-3-chloropropane	GGG. p-Isopropyltoluene	AAAA. Ethyl tert-butyl ether	UUUU.
T. Dibromochloromethane	NN. Methyl ethyl ketone	HHH. 1,4-Dichlorobenzene	BBBB. tert-Amyl methyl ether	VVVV.

*** = System performance check compounds (SPCC) for RRF ; ** = Calibration check compounds (CCC) for %RSD.**

LDC #: 17624A1
SDG #: 1811657

VALIDATION FINDINGS WORKSHEET
Initial Calibration

Reviewer: [illegible]
2nd Reviewer: [illegible]

METHOD: GC/MS VOA (EPA SW 846 Method 8260B)

Please see qualifications below for all questions answered "N". Not applicable questions are identified as "N/A".

- (Y) N N/A — Did the laboratory perform a 5 point calibration prior to sample analysis?
- (Y) N N/A — Were percent relative standard deviations (%RSD) and relative response factors (RRF) within method criteria for all CCC's and SPCC's?
- (Y) N N/A — Was a curve fit used for evaluation? If yes, what was the acceptance criteria used for evaluation?______
- (Y) N N/A — Did the initial calibration meet the acceptance criteria?
- Y (N) N/A — Were all %RSDs and RRFs within the validation criteria of ≤30 %RSD and ≥0.05 RRF ?

#	Date	Standard ID	Compound	Finding %RSD (Limit: ≤30.0%)	Finding RRF (Limit: ≥0.05)	Associated Samples	Qualifications
	9/18/07	ICAL	M		0.045	1, TI25011-BLK	J/UJ/A

INICAL.1SB

LDC #: 17624A1
SDG #: 1211657

VALIDATION FINDINGS WORKSHEET
Continuing Calibration

Page: 1 of 1
Reviewer: M
2nd Reviewer: [illegible]

METHOD: GC/MS VOA (EPA SW 846 Method 8260)

Please see qualifications below for all questions answered "N". Not applicable questions are identified as "N/A".

(Y) N N/A Was a continuing calibration standard analyzed at least once every 12 hours for each instrument?
(Y) N N/A Were percent differences (%D) and relative response factors (RRF) within method criteria for all CCC's and SPCC's ?
Y (N) N/A Were all %D and RRFs within the validation criteria of ≤25 %D and ≥0.05 RRF ?

#	Date	Standard ID	Compound	Finding %D (Limit: ≤25.0%)	Finding RRF (Limit: ≥0.05)	Associated Samples	Qualifications
	9/25/07	VSTD025	F	51.4		1, 7I2501-BLK	J/UJ/A
			M	48.9			↓
			Z	50.9			

CONCAL1S

LABORATORY DATA CONSULTANTS, INC.
7750 El Camino Real, Suite 2L Carlsbad, CA 92009 Phone: 760/634-0437 Fax: 760/634-0439

Tait Environmental Management, Inc.
701 N. Park Center Drive
Santa Ana, CA 92705
ATTN: Ms. Clara Boeru

October 30, 2007

SUBJECT: Boeing Realty Corp. Bldg C-6 Facility, Data Validation

Dear Ms. Boeru,

Enclosed are the final validation reports for the fractions listed below. This SDG was received on October 19, 2007. Attachment 1 is a summary of the samples that were reviewed for each analysis.

LDC Project # 17643:

SDG #	Fraction
IQI1591	Volatiles, Methane, Ethane, & Ethene

The data validation was performed under Tier 3 guidelines. The analyses were validated using the following documents, as applicable to each method:

- USEPA, Contract Laboratory Program National Functional Guidelines for Organic Data Review, October 1999
- EPA SW 846, Third Edition, Test Methods for Evaluating Solid Waste, update 1, July 1992; update IIA, August 1993; update II, September 1994; update IIB, January 1995; update III, December 1996; update IIIA, April 1998

Please feel free to contact us if you have any questions.

Sincerely,

Stella S. Cuenco
Project Manager/Senior Chemist

V:\LOGIN\TAIT\17643COV.wpd

Attachment 1

LDC #17643 (Tait Environmenal Management, Inc. / Boeing Realty Corp., Bldg C-6 Facility)

LDC	SDG#	DATE REC'D	(3) DATE DUE	VOA (8260B)		Methane Ethane Ethene																													
Matrix:	Water/Soil			W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S
A	IQI1591	10/19/07	11/09/07	1	0	1	0																												
Total	B/SC			1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2

Shaded cells indicate Tier III validation (all other cells are Tier II validation). Sample counts do not include MS, MSD, or DUP's.

17643ST.wpd

Boeing Realty Corp., Bldg C-6 Facility
Data Validation Reports
LDC# 17643

Volatiles

Laboratory Data Consultants, Inc.
Data Validation Report

Project/Site Name: Boeing Realty Corp., Bldg. C-6 Facility

Collection Date: September 18, 2007

LDC Report Date: October 29, 2007

Matrix: Water

Parameters: Volatiles

Validation Level: Tier 3

Laboratory: TestAmerica, Inc.

Sample Delivery Group (SDG): IQI1591

Sample Identification

IRZCMW002_WG091807_0001

Introduction

This data review covers one water sample listed on the cover sheet including dilutions and reanalysis as applicable. The analyses were per EPA SW 846 Method 8260B for Volatiles.

This review follows a modified outline of the USEPA Contract Laboratory Program National Functional Guidelines for Organic Data Review (October 1999) as there are no current guidelines for the method stated above.

A qualification summary table is provided at the end of this report if data has been qualified. Flags are classified as P (protocol) or A (advisory) to indicate whether the flag is due to a laboratory deviation from a specified protocol or is of technical advisory nature.

Blank results are summarized in Section V.

Field duplicates are summarized in Section XVI.

The following are definitions of the data qualifiers:

U Indicates the compound or analyte was analyzed for but not detected at or above the stated limit.

J Indicates an estimated value.

R Quality control indicates the data is not usable.

N Presumptive evidence of presence of the constituent.

UJ Indicates the compound or analyte was analyzed for but not detected. The sample detection limit is an estimated value.

A Indicates the finding is based upon technical validation criteria.

P Indicates the finding is related to a protocol/contractual deviation.

None Indicates the data was not significantly impacted by the finding, therefore qualification was not required.

I. Technical Holding Times

All technical holding time requirements were met.

The chain-of-custodies were reviewed for documentation of cooler temperatures. All cooler temperatures met validation criteria.

II. GC/MS Instrument Performance Check

Instrument performance was checked at 12 hour intervals.

All ion abundance requirements were met.

III. Initial Calibration

Initial calibration was performed using required standard concentrations.

Percent relative standard deviations (%RSD) were less than or equal to 15.0% for each individual compound and less than or equal to 30.0% for calibration check compounds (CCCs).

In the case where %RSD was greater than 15.0%, the laboratory used a calibration curve to evaluate the compound. All coefficients of determination (r^2) were greater than or equal to 0.990 .

For the purposes of technical evaluation, all compounds were evaluated against the 30.0% (%RSD) National Functional Guideline criteria. Unless noted above, all compounds were within the validation criteria.

Average relative response factors (RRF) for all volatile target compounds and system performance check compounds (SPCCs) were within method and validation criteria with the following exceptions:

Date	Compound	RRF (Limits)	Associated Samples	Flag	A or P
9/18/07	2-Butanone	0.045 (≥0.05)	All samples in SDG IQI1591	J (all detects) UJ (all non-detects)	A

IV. Continuing Calibration

Continuing calibration was performed at the required frequencies.

Percent differences (%D) between the initial calibration RRF and the continuing calibration RRF were within the method criteria of less than or equal to 20.0% for calibration check compounds (CCCs).

For the purposes of technical evaluation, all compounds were evaluated against the 25.0% (%D) National Functional Guideline criteria. Unless noted above, all compounds were within the validation criteria.

All of the continuing calibration RRF values were within method and validation criteria.

V. Blanks

Method blanks were reviewed for each matrix as applicable. No volatile contaminants were found in the method blanks.

VI. Surrogate Spikes

Surrogates were added to all samples and blanks as required by the method. All surrogate recoveries (%R) were within QC limits.

VII. Matrix Spike/Matrix Spike Duplicates

Matrix spike (MS) and matrix spike duplicate (MSD) samples were reviewed for each matrix as applicable. Percent recoveries (%R) and relative percent differences (RPD) were not within QC limits. Since there were no associated samples, no data were qualified.

VIII. Laboratory Control Samples (LCS)

Laboratory control samples were reviewed for each matrix as applicable. Percent recoveries (%R) were within QC limits.

IX. Regional Quality Assurance and Quality Control

Not applicable.

X. Internal Standards

All internal standard areas and retention times were within QC limits.

XI. Target Compound Identifications

All target compound identifications were within validation criteria.

XII. Compound Quantitation and CRQLs

All compound quantitation and CRQLs were within validation criteria.

XIII. Tentatively Identified Compounds (TICs)

Tentatively identified compounds were not reported by the laboratory.

XIV. System Performance

The system performance was acceptable.

XV. Overall Assessment of Data

Data flags are summarized at the end of this report if data has been qualified.

XVI. Field Duplicates

No field duplicates were identified in this SDG.

XVII. Field Blanks

No field blanks were identified in this SDG.

Boeing Realty Corp., Bldg. C-6 Facility
Volatiles - Data Qualification Summary - SDG IQI1591

SDG	Sample	Compound	Flag	A or P	Reason
IQI1591	IRZCMW002_WG091807_0001	2-Butanone	J (all detects) UJ (all non-detects)	A	Initial calibration (RRF)

Boeing Realty Corp., Bldg. C-6 Facility
Volatiles - Laboratory Blank Data Qualification Summary - SDG IQI1591

No Sample Data Qualified in this SDG

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING
17461 Derian Avenue, Suite 100, Irvine, CA 92614 (949) 261-1022 Fax:(949) 260-3297

TAIT Environmental/Boeing
701 N. Parkcenter Drive
Santa Ana, CA 92705
Attention: Clara Boeru

Project ID: Boeing C-6 Torrance
C6 Semi-Annual and Quarterly GWM Event
Report Number: IQI1591

Sampled: 09/18/07
Received: 09/18/07

VOLATILE ORGANICS by GC/MS (EPA 5030B/8260B)

Analyte	Method	Batch	MDL	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: IQI1591-02 (IRZCMW002_WG091807_0001 - Water)									
Reporting Units: ug/l									
Vinyl chloride	EPA 8260B	7I24002	3.0	5.0	**660**	10	09/24/07	09/24/07	
Surrogate: 4-Bromofluorobenzene (80-120%)					*108 %*				
Surrogate: Dibromofluoromethane (80-120%)					*103 %*				
Surrogate: Toluene-d8 (80-120%)					*105 %*				
Sample ID: IQI1591-02RE1 (IRZCMW002_WG091807_0001 - Water)									
Reporting Units: ug/l									
Acetone	EPA 8260B	7I23004	9.0	20	ND	2	09/23/07	09/23/07	
Benzene	EPA 8260B	7I23004	0.56	2.0	ND	2	09/23/07	09/23/07	
Bromobenzene	EPA 8260B	7I23004	0.54	2.0	ND	2	09/23/07	09/23/07	
Bromochloromethane	EPA 8260B	7I23004	0.64	2.0	ND	2	09/23/07	09/23/07	
Bromodichloromethane	EPA 8260B	7I23004	0.60	2.0	ND	2	09/23/07	09/23/07	
Bromoform	EPA 8260B	7I23004	0.80	2.0	ND	2	09/23/07	09/23/07	
Bromomethane	EPA 8260B	7I23004	0.84	2.0	ND	2	09/23/07	09/23/07	
2-Butanone (MEK)	EPA 8260B	7I23004	9.4	10	ND UJ	2	09/23/07	09/23/07	
n-Butylbenzene	EPA 8260B	7I23004	0.74	2.0	ND	2	09/23/07	09/23/07	
sec-Butylbenzene	EPA 8260B	7I23004	0.50	2.0	ND	2	09/23/07	09/23/07	
tert-Butylbenzene	EPA 8260B	7I23004	0.44	2.0	ND	2	09/23/07	09/23/07	
Carbon Disulfide	EPA 8260B	7I23004	0.96	2.0	ND	2	09/23/07	09/23/07	
Carbon tetrachloride	EPA 8260B	7I23004	0.56	1.0	ND	2	09/23/07	09/23/07	
Chlorobenzene	EPA 8260B	7I23004	0.72	2.0	**0.88**	2	09/23/07	09/23/07	J
Chloroethane	EPA 8260B	7I23004	0.80	4.0	ND	2	09/23/07	09/23/07	
Chloroform	EPA 8260B	7I23004	0.66	2.0	ND	2	09/23/07	09/23/07	
Chloromethane	EPA 8260B	7I23004	0.80	4.0	ND	2	09/23/07	09/23/07	
2-Chlorotoluene	EPA 8260B	7I23004	0.56	2.0	ND	2	09/23/07	09/23/07	
4-Chlorotoluene	EPA 8260B	7I23004	0.58	2.0	ND	2	09/23/07	09/23/07	
1,2-Dibromo-3-chloropropane	EPA 8260B	7I23004	1.9	4.0	ND	2	09/23/07	09/23/07	
Dibromochloromethane	EPA 8260B	7I23004	0.56	2.0	ND	2	09/23/07	09/23/07	
1,2-Dibromoethane (EDB)	EPA 8260B	7I23004	0.80	2.0	ND	2	09/23/07	09/23/07	
1,4-Dichlorobenzene	EPA 8260B	7I23004	0.74	2.0	ND	2	09/23/07	09/23/07	
1,2-Dichlorobenzene	EPA 8260B	7I23004	0.64	2.0	ND	2	09/23/07	09/23/07	
1,3-Dichlorobenzene	EPA 8260B	7I23004	0.70	2.0	ND	2	09/23/07	09/23/07	
Dichlorodifluoromethane	EPA 8260B	7I23004	0.52	2.0	ND	2	09/23/07	09/23/07	
1,2-Dichloroethane	EPA 8260B	7I23004	0.56	1.0	ND	2	09/23/07	09/23/07	
1,1-Dichloroethane	EPA 8260B	7I23004	0.54	2.0	ND	2	09/23/07	09/23/07	
1,1-Dichloroethene	EPA 8260B	7I23004	0.84	2.0	ND	2	09/23/07	09/23/07	
cis-1,2-Dichloroethene	EPA 8260B	7I23004	0.64	2.0	**19**	2	09/23/07	09/23/07	
trans-1,2-Dichloroethene	EPA 8260B	7I23004	0.54	2.0	**4.9**	2	09/23/07	09/23/07	
1,2-Dichloropropane	EPA 8260B	7I23004	0.70	2.0	ND	2	09/23/07	09/23/07	
2,2-Dichloropropane	EPA 8260B	7I23004	0.68	2.0	ND	2	09/23/07	09/23/07	
cis-1,3-Dichloropropene	EPA 8260B	7I23004	0.44	1.0	ND	2	09/23/07	09/23/07	

TestAmerica - Irvine, CA

Nicholas Marz
Project Manager

10/29/07

17461 Derian Avenue. Suite 100, Irvine, CA 92614 (949) 261-1022 Fax:(949) 260-3297

TAIT Environmental/Boeing	Project ID: Boeing C-6 Torrance	
701 N. Parkcenter Drive	C6 Semi-Annual and Quarterly GWM Event	Sampled: 09/18/07
Santa Ana, CA 92705	Report Number: IQI1591	Received: 09/18/07
Attention: Clara Boeru		

VOLATILE ORGANICS by GC/MS (EPA 5030B/8260B)

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: IQI1591-02RE1 (IRZCMW002_WG091807_0001 - Water) - cont.									
Reporting Units: ug/l									
1,1-Dichloropropene	EPA 8260B	7123004	0.56	2.0	ND	2	09/23/07	09/23/07	
trans-1,3-Dichloropropene	EPA 8260B	7123004	0.64	1.0	ND	2	09/23/07	09/23/07	
Ethylbenzene	EPA 8260B	7123004	0.50	2.0	ND	2	09/23/07	09/23/07	
Hexachlorobutadiene	EPA 8260B	7123004	0.76	2.0	ND	2	09/23/07	09/23/07	
2-Hexanone	EPA 8260B	7123004	5.2	12	ND	2	09/23/07	09/23/07	
Iodomethane	EPA 8260B	7123004	2.0	4.0	ND	2	09/23/07	09/23/07	
Isopropylbenzene	EPA 8260B	7123004	0.50	2.0	ND	2	09/23/07	09/23/07	
p-Isopropyltoluene	EPA 8260B	7123004	0.56	2.0	ND	2	09/23/07	09/23/07	
Methyl-tert-butyl Ether (MTBE)	EPA 8260B	7123004	0.64	2.0	ND	2	09/23/07	09/23/07	
Methylene chloride	EPA 8260B	7123004	1.9	2.0	ND	2	09/23/07	09/23/07	
4-Methyl-2-pentanone (MIBK)	EPA 8260B	7123004	7.0	10	ND	2	09/23/07	09/23/07	
n-Propylbenzene	EPA 8260B	7123004	0.54	2.0	ND	2	09/23/07	09/23/07	
Styrene	EPA 8260B	7123004	0.32	2.0	ND	2	09/23/07	09/23/07	
1,1,1,2-Tetrachloroethane	EPA 8260B	7123004	0.54	2.0	ND	2	09/23/07	09/23/07	
1,1,2,2-Tetrachloroethane	EPA 8260B	7123004	0.48	2.0	ND	2	09/23/07	09/23/07	
Tetrachloroethene	EPA 8260B	7123004	0.64	2.0	ND	2	09/23/07	09/23/07	
Tetrahydrofuran (THF)	EPA 8260B	7123004	7.0	20	ND	2	09/23/07	09/23/07	
Toluene	EPA 8260B	7123004	0.72	2.0	ND	2	09/23/07	09/23/07	
1,2,3-Trichlorobenzene	EPA 8260B	7123004	0.60	2.0	ND	2	09/23/07	09/23/07	
1,2,4-Trichlorobenzene	EPA 8260B	7123004	0.96	2.0	ND	2	09/23/07	09/23/07	
1,1,2-Trichloroethane	EPA 8260B	7123004	0.60	2.0	ND	2	09/23/07	09/23/07	
1,1,1-Trichloroethane	EPA 8260B	7123004	0.60	2.0	ND	2	09/23/07	09/23/07	
Trichloroethene	EPA 8260B	7123004	0.52	2.0	**3.2**	2	09/23/07	09/23/07	
Trichlorofluoromethane	EPA 8260B	7123004	0.68	4.0	ND	2	09/23/07	09/23/07	
1,2,3-Trichloropropane	EPA 8260B	7123004	0.80	2.0	ND	2	09/23/07	09/23/07	
1,2,4-Trimethylbenzene	EPA 8260B	7123004	0.46	2.0	ND	2	09/23/07	09/23/07	
1,3,5-Trimethylbenzene	EPA 8260B	7123004	0.52	2.0	ND	2	09/23/07	09/23/07	
Vinyl acetate	EPA 8260B	7123004	2.0	12	ND	2	09/23/07	09/23/07	
Xylenes, Total	EPA 8260B	7123004	1.8	2.0	ND	2	09/23/07	09/23/07	
Surrogate: 4-Bromofluorobenzene (80-120%)					*98 %*				
Surrogate: Dibromofluoromethane (80-120%)					*105 %*				
Surrogate: Toluene-d8 (80-120%)					*105 %*				

TestAmerica - Irvine, CA

Nicholas Marz
Project Manager

11/02/07

LDC #: 17643A1
SDG #: IQI1591
Laboratory: Test America

VALIDATION COMPLETENESS WORKSHEET
Tier 3

Date: 10/26/07
Page: 1 of 1
Reviewer: A
2nd Reviewer: Q

METHOD: GC/MS Volatiles (EPA SW 846 Method 8260B)

The samples listed below were reviewed for each of the following validation areas. Validation findings are noted in attached validation findings worksheets.

	Validation Area		Comments
I.	Technical holding times	A	Sampling dates: 9/18/07
II.	GC/MS Instrument performance check	A	
III.	Initial calibration	SW	%RSD, r2
IV.	Continuing calibration/~~ICV~~	A	
V.	Blanks	A	
VI.	Surrogate spikes	A	
VII.	Matrix spike/Matrix spike duplicates	SW	none assoc'd, no goal
VIII.	Laboratory control samples	A SW	LCS
IX.	Regional Quality Assurance and Quality Control	N	
X.	Internal standards	A	
XI.	Target compound identification	A	
XII.	Compound quantitation/CRQLs	A	
XIII.	Tentatively identified compounds (TICs)	N	not reported
XIV.	System performance	A	
XV.	Overall assessment of data	A	
XVI.	Field duplicates	N	
XVII.	Field blanks	N	

Note: A = Acceptable
N = Not provided/applicable
SW = See worksheet
ND = No compounds detected
R = Rinsate
FB = Field blank
D = Duplicate
TB = Trip blank
EB = Equipment blank

Validated Samples:

1	IRZCMW002_WG091807_0001 W	11	IZ1002-BLK	21		31	
2		12	IZ3004-BLK	22		32	
3		13		23		33	
4		14		24		34	
5		15		25		35	
6		16		26		36	
7		17		27		37	
8		18		28		38	
9		19		29		39	
10		20		30		40	

LDC #: 176432A1
SDG #: 1Q1159

VALIDATION FINDINGS CHECKLIST

Reviewer: R
2nd Reviewer: CV

Method: Volatiles (EPA SW 846 Method 8260B)

Validation Area	Yes	No	NA	Findings/Comments
I. Technical holding times				
All technical holding times were met.	✓			
Cooler temperature criteria was met.	✓			
II. GC/MS Instrument performance check				
Were the BFB performance results reviewed and found to be within the specified criteria?	✓			
Were all samples analyzed within the 12 hour clock criteria?	✓			
III. Initial calibration				
Did the laboratory perform a 5 point calibration prior to sample analysis?	✓			
Were all percent relative standard deviations (%RSD) and relative response factors (RRF) within method criteria for all CCCs and SPCCs?	✓			
Was a curve fit used for evaluation?	✓			
Did the initial calibration meet the curve fit acceptance criteria of $\geq$ 0.990?	✓			
Were all percent relative standard deviations (%RSD) $\leq$ 30% and relative response factors (RRF) $\geq$ 0.05?		✓		
IV. Continuing calibration				
Was a continuing calibration standard analyzed at least once every 12 hours for each instrument?	✓			
Were all percent differences (%D) and relative response factors (RRF) within method criteria for all CCCs and SPCCs?	✓			
Were all percent differences (%D) $\leq$ 25% and relative response factors (RRF) $\geq$ 0.05?	✓			
V. Blanks				
Was a method blank associated with every sample in this SDG?	✓			
Was a method blank analyzed at least once every 12 hours for each matrix and concentration?	✓			
Was there contamination in the method blanks? If yes, please see the Blanks validation completeness worksheet.		✓		
VI. Surrogate spikes				
Were all surrogate %R within QC limits?	✓			
If the percent recovery (%R) for one or more surrogates was out of QC limits, was a reanalysis performed to confirm samples with %R outside of criteria?			✓	
VII. Matrix spike/Matrix spike duplicates				
Were a matrix spike (MS) and matrix spike duplicate (MSD) analyzed for each matrix in this SDG? If no, indicate which matrix does not have an associated MS/MSD. Soil / Water.	✓			
Was a MS/MSD analyzed every 20 samples of each matrix?	✓			
Were the MS/MSD percent recoveries (%R) and the relative percent differences (RPD) within the QC limits?		✓		
VIII. Laboratory control samples				
Was an LCS analyzed for this SDG?	✓			

LDC #: 17643A1
SDG #: 181591

VALIDATION FINDINGS CHECKLIST

Reviewer: K
2nd Reviewer: Q

Validation Area	Yes	No	NA	Findings/Comments
Was an LCS analyzed per analytical batch?	✓			
Were the LCS percent recoveries (%R) and relative percent difference (RPD) within the QC limits?	✓			
IX. Regional Quality Assurance and Quality Control				
Were performance evaluation (PE) samples performed?			✓	
Were the performance evaluation (PE) samples within the acceptance limits?			✓	
X. Internal standards				
Were internal standard area counts within -50% or +100% of the associated calibration standard?	✓			
Were retention times within ± 30 seconds of the associated calibration standard?	✓			
XI. Target compound identification				
Were relative retention times (RRT's) within ± 0.06 RRT units of the standard?	✓			
Did compound spectra meet specified EPA "Functional Guidelines" criteria?	✓			
Were chromatogram peaks verified and accounted for?	✓			
XII. Compound quantitation/CRQLs				
Were the correct internal standard (IS), quantitation ion and relative response factor (RRF) used to quantitate the compound?	✓			
Were compound quantitation and CRQLs adjusted to reflect all sample dilutions and dry weight factors applicable to level IV validation?	✓			
XIII. Tentatively identified compounds (TICs)				
Were the major ions (> 10 percent relative intensity) in the reference spectrum evaluated in sample spectrum?			✓	
Were relative intensities of the major ions within ± 20% between the sample and the reference spectra?			✓	
Did the raw data indicate that the laboratory performed a library search for all required peaks in the chromatograms (samples and blanks)?			✓	
XIV. System performance				
System performance was found to be acceptable.	✓			
XV. Overall assessment of data				
Overall assessment of data was found to be acceptable.	✓			
XVI. Field duplicates				
Field duplicate pairs were identified in this SDG.		✓		
Target compounds were detected in the field duplicates.			✓	
XVII. Field blanks				
Field blanks were identified in this SDG.		✓		
Target compounds were detected in the field blanks.			✓	

TARGET COMPOUND WORKSHEET

METHOD: VOA (EPA SW 846 Method 8260B)

A. Chloromethane*	U. 1,1,2-Trichloroethane	OO. 2,2-Dichloropropane	III. n-Butylbenzene	CCCC.1-Chlorohexane
B. Bromomethane	V. Benzene	PP. Bromochloromethane	JJJ. 1,2-Dichlorobenzene	DDDD. Isopropyl alcohol
C. Vinyl choride**	W. trans-1,3-Dichloropropene	QQ. 1,1-Dichloropropene	KKK. 1,2,4-Trichlorobenzene	EEEE. Acetonitrile
D. Chloroethane	X. Bromoform*	RR. Dibromomethane	LLL. Hexachlorobutadiene	FFFF. Acrolein
E. Methylene chloride	Y. 4-Methyl-2-pentanone	SS. 1,3-Dichloropropane	MMM. Naphthalene	GGGG. Acrylonitrile
F. Acetone	Z. 2-Hexanone	TT. 1,2-Dibromoethane	NNN. 1,2,3-Trichlorobenzene	HHHH. 1,4-Dioxane
G. Carbon disulfide	AA. Tetrachloroethene	UU. 1,1,1,2-Tetrachloroethane	OOO. 1,3,5-Trichlorobenzene	IIII. Isobutyl alcohol
H. 1,1-Dichloroethene**	BB. 1,1,2,2-Tetrachloroethane*	VV. Isopropylbenzene	PPP. trans-1,2-Dichloroethene	JJJJ. Methacrylonitrile
I. 1,1-Dichloroethane*	CC. Toluene**	WW. Bromobenzene	QQQ. cis-1,2-Dichloroethene	KKKK. Propionitrile
J. 1,2-Dichloroethene, total	DD. Chlorobenzene*	XX. 1,2,3-Trichloropropane	RRR. m,p-Xylenes	LLLL. Ethyl ether
K. Chloroform**	EE. Ethylbenzene**	YY. n-Propylbenzene	SSS. o-Xylene	MMMM. Benzyl chloride
L. 1,2-Dichloroethane	FF. Styrene	ZZ. 2-Chlorotoluene	TTT. 1,1,2-Trichloro-1,2,2-trifluoroethane	NNNN.
M. 2-Butanone	GG. Xylenes, total	AAA. 1,3,5-Trimethylbenzene	UUU. 1,2-Dichlorotetrafluoroethane	OOOO.
N. 1,1,1-Trichloroethane	HH. Vinyl acetate	BBB. 4-Chlorotoluene	VVV. 4-Ethyltoluene	PPPP.
O. Carbon tetrachloride	II. 2-Chloroethylvinyl ether	CCC. tert-Butylbenzene	WWW. Ethanol	QQQQ.
P. Bromodichloromethane	JJ. Dichlorodifluoromethane	DDD. 1,2,4-Trimethylbenzene	XXX. Di-isopropyl ether	RRRR.
Q. 1,2-Dichloropropane**	KK. Trichlorofluoromethane	EEE. sec-Butylbenzene	YYY. tert-Butanol	SSSS.
R. cis-1,3-Dichloropropene	LL. Methyl-tert-butyl ether	FFF. 1,3-Dichlorobenzene	ZZZ. tert-Butyl alcohol	TTTT.
S. Trichloroethene	MM. 1,2-Dibromo-3-chloropropane	GGG. p-Isopropyltoluene	AAAA. Ethyl tert-butyl ether	UUUU.
T. Dibromochloromethane	NN. Methyl ethyl ketone	HHH. 1,4-Dichlorobenzene	BBBB. tert-Amyl methyl ether	VVVV.

* = System performance check compounds (SPCC) for RRF ; ** = Calibration check compounds (CCC) for %RSD.

LDC #: 176431
SDG #: IQ11591

VALIDATION FINDINGS WORKSHEET
Initial Calibration

Page: 1 of 1
Reviewer: AC
2nd Reviewer: [signature]

METHOD: GC/MS VOA (EPA SW 846 Method 8260B)

Please see qualifications below for all questions answered "N". Not applicable questions are identified as "N/A".

(Y) N N/A Did the laboratory perform a 5 point calibration prior to sample analysis?
(Y) N N/A Were percent relative standard deviations (%RSD) and relative response factors (RRF) within method criteria for all CCC's and SPCC's?
(Y) N N/A Was a curve fit used for evaluation? If yes, what was the acceptance criteria used for evaluation?_____
(Y) N N/A Did the initial calibration meet the acceptance criteria?
Y (N) N/A Were all %RSDs and RRFs within the validation criteria of ≤30 %RSD and ≥0.05 RRF ?

#	Date	Standard ID	Compound	Finding %RSD (Limit: ≤30.0%)	Finding RRF (Limit: ≥0.05)	Associated Samples	Qualifications
	~~9/4/07~~	ICAL	M		~~0.040~~	1, 7I23004-BLK	J/UJ/A
	9/18/07				0.045		

INICAL.1SB

BOE-C6-0056276

LDC #: 16433A1
SDG #: 121591

VALIDATION FINDINGS WORKSHEET
Initial Calibration Calculation Verification

Reviewer: A
2nd Reviewer: Q

METHOD: GC/MS VOA (EPA SW 846 Method 8260B)

The Relative Response Factor (RRF), average RRF, and percent relative standard deviation (%RSD) were recalculated for the compounds identified below using the following calculations:

$RRF = (A_x)(C_{is})/(A_{is})(C_x)$
average RRF = sum of the RRFs/number of standards
%RSD = 100 * (S/X)

A_x = Area of compound,
C_x = Concentration of compound,
S = Standard deviation of the RRFs
X = Mean of the RRFs

A_{is} = Area of associated internal standard
C_{is} = Concentration of internal standard

#	Standard ID	Calibration Date	Compound (Reference Internal Standard)	Reported RRF (10 std)	Recalculated RRF (10 std)	Reported Average RRF (initial)	Recalculated Average RRF (initial)	Reported %RSD	Recalculated %RSD
1	ICAL	9/12/07	C (1st internal standard)	0.374	0.374	0.363	0.363	6.58	6.58
			√ (2nd internal standard)	1.293	1.293	1.210	1.210	11.98	11.98
			EE (3rd internal standard)	1.778	1.778	1.581	1.581	13.84	13.84
2			BB (1st internal standard)	0.619	0.619	0.524	0.524	13.81	13.81
			(2nd internal standard)						
			(3rd internal standard)						
3	ICAL	9/14/07	C (1st internal standard)	0.350	0.350	0.371	0.371	5.35	5.38
			(2nd internal standard)						
			(3rd internal standard)						
4			(1st internal standard)						
			(2nd internal standard)						
			(3rd internal standard)						

Comments: Refer to Initial Calibration findings worksheet for list of qualifications and associated samples when reported results do not agree within 10.0% of the recalculated results.

LDC #: 17643A1
SDG #: 1Q1591

VALIDATION FINDINGS WORKSHEET
Continuing Calibration Results Verification

Reviewer:
2nd Reviewer:

METHOD: GC/MS VOA (EPA SW 846 Method 8260B)

The percent difference (%D) of the initial calibration average Relative Response Factors (RRFs) and the continuing calibration RRFs were recalculated for the compounds identified below using the following calculation:

% Difference = 100 * (ave. RRF - RRF)/ave. RRF
$RRF = (A_x)(C_{is})/(A_{is})(C_x)$

Where: ave. RRF = initial calibration average RRF
RRF = continuing calibration RRF
A_x = Area of compound, A_{is} = Area of associated internal standard
C_x = Concentration of compound, C_{is} = Concentration of internal standard

#	Standard ID	Calibration Date	Compound (Reference internal Standard)	Average RRF (initial)	Reported RRF (CC)	Recalculated RRF (CC)	Reported %D	Recalculated %D
1	VSTD025	9/24/07	C (1st internal standard)	0.371	0.397	0.397	7.1	7.0
			(2nd internal standard)					
			(3rd internal standard)					
2	VSTD02C	9/23/07	C (1st internal standard)	0.363	0.390	0.390	7.4	7.5
			V (2nd internal standard)	1.210	1.215	1.215	0.4	0.4
			~~EE~~ (3rd internal standard)	1.581	1.684	1.684	6.5	6.5
3			DB (~~1st~~ 4th internal standard)	0.524	0.573	0.573	9.4	9.3
			(2nd internal standard)					
			(3rd internal standard)					
4			(1st internal standard)					
			(2nd internal standard)					
			(3rd internal standard)					

Comments: Refer to Continuing Calibration findings worksheet for list of qualifications and associated samples when reported results do not agree within 10.0% of the recalculated results.

LDC #: 17643A1
SDG #: 1Q11591

VALIDATION FINDINGS WORKSHEET
Surrogate Results Verification

Reviewer: [signature]
2nd reviewer: [signature]

METHOD: GC/MS VOA (EPA SW 846 Method 8260B)

The percent recoveries (%R) of surrogates were recalculated for the compounds identified below using the following calculation:

% Recovery: SF/SS * 100

Where: SF = Surrogate Found
SS = Surrogate Spiked

Sample ID: 1

	Surrogate Spiked	Surrogate Found	Percent Recovery Reported	Percent Recovery Recalculated	Percent Difference
Toluene-d8	25	26.13	105	105	0
Bromofluorobenzene	↓	24.38	98	98	↓
1,2-Dichloroethane-d4					
Dibromofluoromethane	25	26.31	105	105	0

Sample ID:

	Surrogate Spiked	Surrogate Found	Percent Recovery Reported	Percent Recovery Recalculated	Percent Difference
Toluene-d8					
Bromofluorobenzene					
1,2-Dichloroethane-d4					
Dibromofluoromethane					

Sample ID:

	Surrogate Spiked	Surrogate Found	Percent Recovery Reported	Percent Recovery Recalculated	Percent Difference
Toluene-d8					
Bromofluorobenzene					
1,2-Dichloroethane-d4					
Dibromofluoromethane					

Sample ID:

	Surrogate Spiked	Surrogate Found	Percent Recovery Reported	Percent Recovery Recalculated	Percent Difference
Toluene-d8					
Bromofluorobenzene					
1,2-Dichloroethane-d4					
Dibromofluoromethane					

Sample ID:

	Surrogate Spiked	Surrogate Found	Percent Recovery Reported	Percent Recovery Recalculated	Percent Difference
Toluene-d8					
Bromofluorobenzene					
1,2-Dichloroethane-d4					
Dibromofluoromethane					

LDC #: 176431
SDG #: 12159

VALIDATION FINDINGS WORKSHEET
Laboratory Control Sample Results Verification

Reviewer: a
2nd Reviewer: Q

METHOD: GC/MS VOA (EPA SW 846 Method 8260B)

The percent recoveries (%R) and Relative Percent Difference (RPD) of the laboratoy control sample and laboratory control sample duplicate (if applicable) were recalculated for the compounds identified below using the following calculation:

% Recovery = 100 * SSC/SA Where: SSC = Spiked sample concentration
SA = Spike added

RPD = I LCS - LCSD I * 2/(LCS + LCSD) LCS = Laboraotry control sample percent recovery LCSD = Laboratory control sample duplicate percent recovery

LCS ID: 7I23004-BS1

Compound	Spike Added (ug/L)		Spiked Sample Concentration (ug/L)		LCS Percent Recovery		LCSD Percent Recovery		LCS/LCSD RPD	
	LCS	LCSD	LCS	LCSD	Reported	Recalc	Reported	Recalc	Reported	Recalculated
1,1-Dichloroethene	25		22.38		90	90				
Trichloroethene	↓		24.74		99	99				
Benzene			23.70		95	95				
Toluene			24.87		99	99				
Chlorobenzene			24.29		97	97				

Comments: Refer to Laboratory Control Sample findings worksheet for list of qualifications and associated samples when reported results do not agree within 10.0% of the recalculated results.

LDC #: 176431
SDG #: 1211591

VALIDATION FINDINGS WORKSHEET
Sample Calculation Verification

Reviewer:
2nd reviewer:

METHOD: GC/MS VOA (EPA SW 846 Method 8260B)

Y N N/A Were all reported results recalculated and verified for all level IV samples?
Y N N/A Were all recalculated results for detected target compounds agree within 10.0% of the reported results?

Concentration = $\frac{(A_x)(I_s)(DF)}{(A_{is})(RRF)(V_o)(\%S)}$

A_x = Area of the characteristic ion (EICP) for the compound to be measured

A_{is} = Area of the characteristic ion (EICP) for the specific internal standard

I_s = Amount of internal standard added in nanograms (ng)

RRF = Relative response factor of the calibration standard.

V_o = Volume or weight of sample pruged in milliliters (ml) or grams (g).

Df = Dilution factor.

%S = Percent solids, applicable to soils and solid matrices only.

Example:

Sample I.D. 1 , C :

Conc. = $\frac{(667553)(25)(10)}{(680028)(0.371)(\quad)(\quad)}$

= 660 ug/L

#	Sample ID	Compound	Reported Concentration ( )	Calculated Concentration ( )	Qualification

Boeing Realty Corp., Bldg C-6 Facility
Data Validation Reports
LDC# 17643

Methane-Ethane-Ethene

Laboratory Data Consultants, Inc.
Data Validation Report

Project/Site Name: Boeing Realty Corp., Bldg. C-6 Facility

Collection Date: September 18, 2007

LDC Report Date: October 29, 2007

Matrix: Water

Parameters: Dissolved Gases

Validation Level: Tier 3

Laboratory: TestAmerica, Inc./Air Technology Laboratories, Inc.

Sample Delivery Group (SDG): IQI1591/A7092005

Sample Identification

IRZCMW002_WG091807_0001

Introduction

This data review covers one water sample listed on the cover sheet including dilutions and reanalysis as applicable. The analyses were per Method RSK-175 for Dissolved Gases.

This review follows a modified outline of the USEPA Contract Laboratory Program National Functional Guidelines for Organic Data Review (October 1999) as there are no current guidelines for the method stated above.

A qualification summary table is provided at the end of this report if data has been qualified. Flags are classified as P (protocol) or A (advisory) to indicate whether the flag is due to a laboratory deviation from a specified protocol or is of technical advisory nature.

Blank results are summarized in Section III.

Field duplicates are summarized in Section IX.

The following are definitions of the data qualifiers:

U Indicates the compound or analyte was analyzed for but not detected at or above the stated limit.

J Indicates an estimated value.

R Quality control indicates the data is not usable.

N Presumptive evidence of presence of the constituent.

UJ Indicates the compound or analyte was analyzed for but not detected. The sample detection limit is an estimated value.

A Indicates the finding is based upon technical validation criteria.

P Indicates the finding is related to a protocol/contractual deviation.

None Indicates the data was not significantly impacted by the finding, therefore qualification was not required.

I. Technical Holding Times

All technical holding time requirements were met.

The chain-of-custodies were reviewed for documentation of cooler temperatures. All cooler temperatures met validation criteria.

II. Calibration

a. Initial Calibration

Initial calibration of compounds was performed as required by the method.

A curve fit, based on the initial calibration, was established for quantitation. The coefficient of determination (r^2) was greater than or equal to 0.990 .

b. Calibration Verification

Calibration verification was performed at required frequencies. The percent differences (%D) of amounts in continuing standard mixtures were within the 25.0% QC limits.

III. Blanks

Method blanks were reviewed for each matrix as applicable. No dissolved gas contaminants were found in the method blanks.

IV. Accuracy and Precision Data

a. Surrogate Recovery

Surrogates were not required by the method.

b. Matrix Spike/Matrix Spike Duplicates

The laboratory has indicated that there were no matrix spike (MS) and matrix spike duplicate (MSD) analyses specified for the samples in this SDG, and therefore matrix spike and matrix spike duplicate analyses were not performed for this SDG.

c. Laboratory Control Samples

Laboratory control samples were reviewed for each matrix as applicable. Percent recoveries (%R) and relative percent differences (RPD) were within QC limits.

V. Target Compound Identification

All target compound identifications were within validation criteria.

VI. Compound Quantitation and CRQLs

All compound quantitation and CRQLs were within validation criteria.

VII. System Performance

The system performance was acceptable.

VIII. Overall Assessment of Data

Data flags are summarized at the end of this report if data has been qualified.

IX. Field Duplicates

No field duplicates were identified in this SDG.

X. Field Blanks

No field blanks were identified in this SDG.

Boeing Realty Corp., Bldg. C-6 Facility
Dissolved Gases - Data Qualification Summary - SDG IQI1591/A7092005

No Sample Data Qualified in this SDG

Boeing Realty Corp., Bldg. C-6 Facility
Dissolved Gases - Laboratory Blank Data Qualification Summary - SDG IQI1591/A7092005

No Sample Data Qualified in this SDG

Client: TestAmerica
Attn: Nicholas Marz

Client's Project: IQI1591
Date Received: 9/20/2007
Matrix: Water
Units: ug/L

IRZCMW002_WG091807_0001

Dissolved Gases by EPA Procedure RSKSOP-175

Lab No.:		A7092005-01		A7092005-02		A7092005-03		A7092005-04		A7092005-05	
Client Sample I.D.:		IQI1591-01		IQI1591-02		IQI1591-03		IQI1591-04		IQI1591-05	
Date Sampled:		9/18/2007		9/18/2007		9/18/2007		9/18/2007		9/18/2007	
Date Analyzed:		9/22/2007		9/22/2007		9/22/2007		9/22/2007		9/22/2007	
Analyst Initials:		DT		DT		DT		DT		DT	
Data File:		22sep006		22sep007		22sep008		22sep009		22sep010	
QC Batch:		070922GC8A1		070922GC8A1		070922GC8A1		070922GC8A1		070922GC8A1	
Dilution Factor:		1.0		1.0		1.0		1.0		1.0	
ANALYTE	PQL	RL	Results	RL	Results	RL	Results	RL	Results	RL	Results
Methane	1.0	1.0	4.0	1.0	13,000	1.0	450	1.0	2.5	1.0	140
Ethane	2.0	2.0	ND	2.0	ND	2.0	ND	2.0	ND	2.0	ND
Ethylene	3.0	3.0	7.9	3.0	3.6	3.0	6.1	3.0	7.6	3.0	7.6

PQL = Practical Quantitation Limit
ND = Not Detected (Below RL)
RL = PQL X Dilution Factor

Reviewed/Approved By: _____ Date: 9-28-07
Mark J. Johnson
Operations Manager

The cover letter is an integral part of this analytical report.

9/28/07

LDC #: 17643A51 **VALIDATION COMPLETENESS WORKSHEET** Date: 10/26/07

SDG #: IQI1591/A7092005 Tier 3 Page: 1 of 1

Laboratory: ~~Del Mar Analytical~~/Air Technology Laboratory, Inc. Reviewer: [illegible]

Test America 2nd Reviewer: [illegible]

METHOD: GC Dissolved Gases (Method RSK-175)

The samples listed below were reviewed for each of the following validation areas. Validation findings are noted in attached validation findings worksheets.

	Validation Area		Comments
I.	Technical holding times	A	Sampling dates: 9/18/07
IIa.	Initial calibration	A	r2
IIb.	Calibration verification	A	%D ≤ 25
III.	Blanks	A	
IVa.	Surrogate recovery	N	not required
IVb.	Matrix spike/Matrix spike duplicates	N	client qualified
IVc.	Laboratory control samples	A	LCS/D
V.	Target compound identification	A	
VI.	Compound Quantitation and CRQLs	A	
VII.	System Performance	A	
VIII.	Overall assessment of data	A	
IX.	Field duplicates	N	
X.	Field blanks	N	

Note: A = Acceptable; N = Not provided/applicable; SW = See worksheet; ND = No compounds detected; R = Rinsate; FB = Field blank; D = Duplicate; TB = Trip blank; EB = Equipment blank

Validated Samples: H_2O

1	IRZCMW002_WG091807_0001	11		21		31	
2		12		22		32	
3		13		23		33	
4		14		24		34	
5		15		25		35	
6		16		26		36	
7		17		27		37	
8		18		28		38	
9		19		29		39	
10		20		30		40	

Notes: _____

LDC #: 17643A51
SDG #: 181591

VALIDATION FINDINGS CHECKLIST

Reviewer: A
2nd Reviewer: A

Method: ✓ GC ____ HPLC

Validation Area	Yes	No	NA	Findings/Comments
I. Technical holding times				
All technical holding times were met.	✓			
Cooler temperature criteria was met.	✓			
II. Initial calibration				
Did the laboratory perform a 5 point calibration prior to sample analysis?	✓			
Was a linear fit used for evaluation? If yes, were all percent relative standard deviations (%RSD) ≤ 20%?		✓		
Was a curve fit used for evaluation? If Yes, what was the acceptance criteria used? r² ≥ 0.990	✓			
Did the initial calibration meet the curve fit acceptance criteria?	✓			
Were the RT windows properly established?	✓			
IV. Continuing calibration				
What type of continuing calibration calculation was performed? ✓ %D or ___ %R	✓			
Was a continuing calibration analyzed daily?	✓			
Were all percent differences (%D) ≤ 15%.0 or percent recoveries 85-115%?	✓			0%
Were all the retention times within the acceptance windows?	✓			
V. Blanks				
Was a method blank associated with every sample in this SDG?	✓			
Was a method blank analyzed for each matrix and concentration?	✓			
Was there contamination in the method blanks? If yes, please see the Blanks validation completeness worksheet.		✓		
VI. Surrogate spikes				
Were all surrogate %R within the QC limits?		✓		
If the percent recovery (%R) of one or more surrogates was outside QC limits, was a reanalysis performed to confirm %R?			✓	
If any %R was less than 10 percent, was a reanalysis performed to confirm %R?			✓	
VII. Matrix spike/Matrix spike duplicates				
Were a matrix spike (MS) and matrix spike duplicate (MSD) analyzed for each matrix in this SDG? If no, indicate which matrix does not have an associated MS/MSD. Soil / Water.		✓		
Was a MS/MSD analyzed every 20 samples of each matrix?		✓		
Were the MS/MSD percent recoveries (%R) and the relative percent differences (RPD) within the QC limits?			✓	
VIII. Laboratory control samples				
Was an LCS analyzed for this SDG?	✓			
Was an LCS analyzed per extraction batch?	✓			

LDC #: 17643151
SDG #: 1Q11591

VALIDATION FINDINGS CHECKLIST

Reviewer: [illegible]
2nd Reviewer: [illegible]

Validation Area	Yes	No	NA	Findings/Comments
Were the LCS percent recoveries (%R) and relative percent difference (RPD) within the QC limits?	✓			
IX. Regional Quality Assurance and Quality Control				
Were performance evaluation (PE) samples performed?			✓	
Were the performance evaluation (PE) samples within the acceptance limits?			✓	
X. Target compound identification				
Were the retention times of reported detects within the RT windows?	✓			
XI. Compound quantitation/CRQLs				
Were compound quantitation and CRQLs adjusted to reflect all sample dilutions and dry weight factors applicable to level IV validation?	✓			
XII. System performance				
System performance was found to be acceptable.	✓			
XIII. Overall assessment of data				
Overall assessment of data was found to be acceptable.	✓			
XIV. Field duplicates				
Were field duplicate pairs identified in this SDG?		✓		
Were target compounds idetected in the field duplicates?			✓	
XV. Field blanks				
Were field blanks identified in this SDG?		✓		
Were target compounds detected in the field blanks?			✓	

LDC#: 17643A51
SDG#: 181151

VALIDATION FINDINGS WORKSHEET
Initial Calibration Calculation Verification

Reviewer: KL
2nd Reviewer: [illegible]

Method: RSK-175

Calibration Date	ID	Compound	(x) Concentration	(y) Response
5/15/2007	TCD front	Methane	1000	2109
			5000	11501
			10000	25221
			100000	261792
			500000	1299049

Regression Output	*Calculated*	*Reported*
Constant	*0.000000*	
Std Err of Y Est		
R Squared	*0.999995*	*0.999995*
Degrees of Freedom		
X Coefficient(s)	*2.599*	*2.598800*
Std Err of Coef.		
Correlation Coefficient	*0.999997*	
Coefficient of Determination (r^2)	*0.999995*	

LDC #: 17643A1
SDG #: 181591

VALIDATION FINDINGS WORKSHEET
Continuing Calibration Results Verification

Reviewer: A
2nd Reviewer: A

METHOD: GC ✓ HPLC _____

The percent difference (%D) of the initial calibration average Calibration Factors (CF) and the continuing calibration CF were recalculated for the compounds identified below using the following calculation:

% Difference = 100 * (ave. CF - CF)/ave. CF
CF = A/C

Where: ave. CF = initial calibration average CF
CF = continuing calibration CF
A = Area of compound
C = Concentration of compound

#	Standard ID	Calibration Date	Compound	Average CF(Ical)/ CCV Conc.	Reported CF/Conc. CCV	Recalculated CF/Conc. CCV	Reported %D	Recalculated %D
1	23sep007	9/22/07	methane	100000	~~860.512~~	~~860.512~~	~~13.9~~	~~13.9~~
					98815.047	98812.914	1.2	1.2
2								
3								
4								

Comments: Refer to Continuing Calibration findings worksheet for list of qualifications and associated samples when reported results do not agree within 10.0% of the recalculated results.

LDC #: 176345|
SDG #: 181591

VALIDATION FINDINGS WORKSHEET
Laboratory Control Sample/Laboratory Control Sample Duplicates Results Verification

Reviewer: R
2nd Reviewer:

____METHOD: ✓ GC __HPLC

The percent recoveries (%R) and relative percent differences (RPD) of the laboratory control sample and laboratory control sample duplicate were recalculated for the compounds identified below using the following calculation:

%Recovery = 100 * (SSC - SC)/SA

Where SSC = Spiked sample concentration; SA = Spike added; SC = Sample concentration

RPD =(({SSCLCS - SSCLCSD} * 2) / (SSCLCS + SSCLCSD))*100

LCS = Laboratory Control Sample; LCSD = Laboratory Control Sample duplicate

LCS/LCSD samples: 9/22/07 LCS/D

Compound	Spike Added (ug/mL)		Sample Conc. ( )	Spike Sample Concentration (ppb)		LCS Percent Recovery		LCSD Percent Recovery		LCS/LCSD RPD	
	LCS	LCSD	---	LCS	LCSD	Reported	Recalc.	Reported	Recalc.	Reported	Recalc.
Gasoline (8015)											
Diesel (8015)											
Benzene (8021B)											
Methane (RSK-175)	7000	7050		6711.162	6339.844	97	96	91	90	5.8	5.8
2,4-D (8151)											
Dinoseb (8151)											
Naphthalene (8310)											
Anthracene (8310)											
HMX (8330)											
2,4,6-Trinitrotoluene (8330)											

Comments: Refer to Laboratory Control Sample/Laboratory Control Sample Duplicate findings worksheet for list of qualifications and associated samples when reported results do not agree within 10.0% of the recalculated results.

LDC #: 17643A51
SDG #: 1a1591

VALIDATION FINDINGS WORKSHEET
Sample Calculation Verification

Reviewer: ~
2nd Reviewer: ~

METHOD: ✓ GC __ HPLC

Y N N/A Were all reported results recalculated and verified for all level IV samples?
Y N N/A Were all recalculated results for detected target compounds agree within 10% of the reported results?

Concentration= $\frac{(A)(Fv)(Df)}{(RF)(Vs \text{ or } Ws)(\%S/100)}$

A= Area or height of the compound to be measured
Fv= Final Volume of extract
Df= Dilution Factor
RF= Average response factor of the compound in the initial calibration
Vs= Initial volume of the sample
Ws= Initial weight of the sample
%S= Percent Solid

Example:

Sample ID. 1 Compound Name methane

Concentration =

#	Sample ID	Compound	Reported Concentrations	Recalculated Results Concentrations	Qualifications
	y = 2.5988 x				
	x = 370973 / 2.5988 = 142747.81				
	mg/L gas HS =	(0.14274781)(55.5)(16)(1000)/41300 = 3.069251			
	gas in liquid = (2.75)(0.14274781)(16)(4)(1000)/(34)(298)(22.4) =			10.378756	
	Tc =	(3.069251 + 10.378756)(1000) =		13000 ppmv	

Comments: